

Below is the list of the parameters and functions after recasting the distribution function into the following form:

$$\sum_i A'_i \omega_i(\Omega)$$

The helicity amplitudes and d-functions are of the following form:  $A_{\lambda\ell\ell}$ ,  $T_{\lambda_Z\lambda_\gamma\lambda_{qq}}^J$  and  $d_{\lambda_{qq}\lambda_{Z\gamma}}^J$ ,  $d_{\lambda_Z\lambda_{\ell\ell}}^1$   
Thus:

$$A'_0 = |A_{-1}|^2 [Re(T_{-1,-1,-1}^1)Re(T_{-1,-1,-1}^1) + Im(T_{-1,-1,-1}^1)Im(T_{-1,-1,-1}^1)] \\ \omega_0 = 2[(2*1+1)(2*1+1)d_{-1,0}^1 * d_{-1,0}^1 * d_{-1,-1}^1 * d_{-1,-1}^1]$$

$$A'_1 = |A_{-1}|^2 [Re(T_{-1,-1,-1}^1)Re(T_{0,-1,-1}^1) + Im(T_{-1,-1,-1}^1)Im(T_{0,-1,-1}^1)] \\ \omega_1 = [(2*1+1)(2*1+1)d_{-1,0}^1 * d_{-1,1}^1 * d_{-1,-1}^1 * d_{0,-1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [0\phi_\ell + -1\phi_Z])$$

$$A'_2 = |A_{-1}|^2 [Re(T_{-1,-1,-1}^1)Re(T_{-1,-1,-1}^2) + Im(T_{-1,-1,-1}^1)Im(T_{-1,-1,-1}^2)] \\ \omega_2 = [(2*1+1)(2*2+1)d_{-1,0}^1 * d_{-1,0}^2 * d_{-1,-1}^1 * d_{-1,-1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [1\phi_\ell + -2\phi_Z])$$

$$A'_3 = |A_{-1}|^2 [Re(T_{-1,-1,-1}^1)Re(T_{0,-1,-1}^2) + Im(T_{-1,-1,-1}^1)Im(T_{0,-1,-1}^2)] \\ \omega_3 = [(2*1+1)(2*2+1)d_{-1,0}^1 * d_{-1,1}^2 * d_{-1,-1}^1 * d_{0,-1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [0\phi_\ell + -1\phi_Z])$$

$$A'_4 = |A_{-1}|^2 [Re(T_{-1,-1,-1}^1)Re(T_{1,-1,-1}^2) + Im(T_{-1,-1,-1}^1)Im(T_{1,-1,-1}^2)] \\ \omega_4 = [(2*1+1)(2*2+1)d_{-1,0}^1 * d_{-1,2}^2 * d_{-1,-1}^1 * d_{1,-1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [-1\phi_\ell + 0\phi_Z])$$

$$A'_5 = |A_{-1}|^2 [Re(T_{-1,-1,-1}^1)Re(T_{-1,-1,0}^0) + Im(T_{-1,-1,-1}^1)Im(T_{-1,-1,0}^0)] \\ \omega_5 = [(2*1+1)(2*0+1)d_{-1,0}^1 * d_{0,0}^0 * d_{-1,-1}^1 * d_{-1,-1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [1\phi_\ell + -1\phi_Z])$$

$$A'_6 = |A_{-1}|^2 [Re(T_{-1,-1,-1}^1)Re(T_{-1,-1,0}^1) + Im(T_{-1,-1,-1}^1)Im(T_{-1,-1,0}^1)] \\ \omega_6 = [(2*1+1)(2*1+1)d_{-1,0}^1 * d_{0,0}^1 * d_{-1,-1}^1 * d_{-1,-1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [1\phi_\ell + -1\phi_Z])$$

$$A'_7 = |A_{-1}|^2 [Re(T_{-1,-1,-1}^1)Re(T_{0,-1,0}^1) + Im(T_{-1,-1,-1}^1)Im(T_{0,-1,0}^1)] \\ \omega_7 = [(2*1+1)(2*1+1)d_{-1,0}^1 * d_{0,1}^1 * d_{-1,-1}^1 * d_{0,-1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [0\phi_\ell + 0\phi_Z])$$

$$A'_8 = |A_{-1}|^2 [Re(T_{-1,-1,-1}^1)Re(T_{-1,-1,0}^2) + Im(T_{-1,-1,-1}^1)Im(T_{-1,-1,0}^2)] \\ \omega_8 = [(2*1+1)(2*2+1)d_{-1,0}^1 * d_{0,0}^2 * d_{-1,-1}^1 * d_{-1,-1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [1\phi_\ell + -1\phi_Z])$$

$$A'_9 = |A_{-1}|^2 [Re(T_{-1,-1,-1}^1)Re(T_{0,-1,0}^2) + Im(T_{-1,-1,-1}^1)Im(T_{0,-1,0}^2)] \\ \omega_9 = [(2*1+1)(2*2+1)d_{-1,0}^1 * d_{0,1}^2 * d_{-1,-1}^1 * d_{0,-1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [0\phi_\ell + 0\phi_Z])$$

$$A'_{10} = |A_{-1}|^2 [Re(T_{-1,-1,-1}^1)Re(T_{1,-1,0}^2) + Im(T_{-1,-1,-1}^1)Im(T_{1,-1,0}^2)] \\ \omega_{10} = [(2*1+1)(2*2+1)d_{-1,0}^1 * d_{0,2}^2 * d_{-1,-1}^1 * d_{1,-1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [-1\phi_\ell + 1\phi_Z])$$

$$\begin{aligned}
A'_{11} &= |A_{-1}|^2 [Re(T_{-1,-1,-1}^1)Re(T_{-1,-1,1}^1) + Im(T_{-1,-1,-1}^1)Im(T_{-1,-1,1}^1)] \\
\omega_{11} &= [(2*1+1)(2*1+1)d_{-1,0}^1 * d_{1,0}^1 * d_{-1,-1}^1 * d_{-1,-1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [1\phi_\ell + 0\phi_Z]) \\
A'_{12} &= |A_{-1}|^2 [Re(T_{-1,-1,-1}^1)Re(T_{0,-1,1}^1) + Im(T_{-1,-1,-1}^1)Im(T_{0,-1,1}^1)] \\
\omega_{12} &= [(2*1+1)(2*1+1)d_{-1,0}^1 * d_{1,1}^1 * d_{-1,-1}^1 * d_{0,-1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [0\phi_\ell + 1\phi_Z]) \\
A'_{13} &= |A_{-1}|^2 [Re(T_{-1,-1,-1}^1)Re(T_{-1,-1,1}^2) + Im(T_{-1,-1,-1}^1)Im(T_{-1,-1,1}^2)] \\
\omega_{13} &= [(2*1+1)(2*2+1)d_{-1,0}^1 * d_{1,0}^2 * d_{-1,-1}^1 * d_{-1,-1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [1\phi_\ell + 0\phi_Z]) \\
A'_{14} &= |A_{-1}|^2 [Re(T_{-1,-1,-1}^1)Re(T_{0,-1,1}^2) + Im(T_{-1,-1,-1}^1)Im(T_{0,-1,1}^2)] \\
\omega_{14} &= [(2*1+1)(2*2+1)d_{-1,0}^1 * d_{1,1}^2 * d_{-1,-1}^1 * d_{0,-1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [0\phi_\ell + 1\phi_Z]) \\
A'_{15} &= |A_{-1}|^2 [Re(T_{-1,-1,-1}^1)Re(T_{1,-1,1}^2) + Im(T_{-1,-1,-1}^1)Im(T_{1,-1,1}^2)] \\
\omega_{15} &= [(2*1+1)(2*2+1)d_{-1,0}^1 * d_{1,2}^2 * d_{-1,-1}^1 * d_{1,-1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [-1\phi_\ell + 2\phi_Z]) \\
A'_{16} &= |A_{-1}|^2 [Re(T_{0,-1,-1}^1)Re(T_{0,-1,-1}^1) + Im(T_{0,-1,-1}^1)Im(T_{0,-1,-1}^1)] \\
\omega_{16} &= 2[(2*1+1)(2*1+1)d_{-1,1}^1 * d_{1,1}^1 * d_{0,-1}^1 * d_{0,-1}^1] \\
A'_{17} &= |A_{-1}|^2 [Re(T_{0,-1,-1}^1)Re(T_{-1,-1,-1}^2) + Im(T_{0,-1,-1}^1)Im(T_{-1,-1,-1}^2)] \\
\omega_{17} &= [(2*1+1)(2*2+1)d_{-1,1}^1 * d_{-1,0}^2 * d_{0,-1}^1 * d_{-1,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [1\phi_\ell + -2\phi_Z]) \\
A'_{18} &= |A_{-1}|^2 [Re(T_{0,-1,-1}^1)Re(T_{0,-1,-1}^2) + Im(T_{0,-1,-1}^1)Im(T_{0,-1,-1}^2)] \\
\omega_{18} &= [(2*1+1)(2*2+1)d_{-1,1}^1 * d_{-1,1}^2 * d_{0,-1}^1 * d_{0,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [0\phi_\ell + -1\phi_Z]) \\
A'_{19} &= |A_{-1}|^2 [Re(T_{0,-1,-1}^1)Re(T_{1,-1,-1}^2) + Im(T_{0,-1,-1}^1)Im(T_{1,-1,-1}^2)] \\
\omega_{19} &= [(2*1+1)(2*2+1)d_{-1,1}^1 * d_{-1,2}^2 * d_{0,-1}^1 * d_{1,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [-1\phi_\ell + 0\phi_Z]) \\
A'_{20} &= |A_{-1}|^2 [Re(T_{0,-1,-1}^1)Re(T_{-1,-1,0}^0) + Im(T_{0,-1,-1}^1)Im(T_{-1,-1,0}^0)] \\
\omega_{20} &= [(2*1+1)(2*0+1)d_{-1,1}^1 * d_{0,0}^0 * d_{0,-1}^1 * d_{-1,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [1\phi_\ell + -1\phi_Z]) \\
A'_{21} &= |A_{-1}|^2 [Re(T_{0,-1,-1}^1)Re(T_{-1,-1,0}^1) + Im(T_{0,-1,-1}^1)Im(T_{-1,-1,0}^1)] \\
\omega_{21} &= [(2*1+1)(2*1+1)d_{-1,1}^1 * d_{0,0}^1 * d_{0,-1}^1 * d_{-1,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [1\phi_\ell + -1\phi_Z]) \\
A'_{22} &= |A_{-1}|^2 [Re(T_{0,-1,-1}^1)Re(T_{0,-1,0}^1) + Im(T_{0,-1,-1}^1)Im(T_{0,-1,0}^1)] \\
\omega_{22} &= [(2*1+1)(2*1+1)d_{-1,1}^1 * d_{0,1}^1 * d_{0,-1}^1 * d_{0,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [0\phi_\ell + 0\phi_Z]) \\
A'_{23} &= |A_{-1}|^2 [Re(T_{0,-1,-1}^1)Re(T_{-1,-1,0}^2) + Im(T_{0,-1,-1}^1)Im(T_{-1,-1,0}^2)]
\end{aligned}$$

$$\begin{aligned}
\omega_{23} &= [(2*1+1)(2*2+1)d_{-1,1}^1 * d_{0,0}^2 * d_{0,-1}^1 * d_{-1,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [1\phi_\ell + -1\phi_Z]) \\
A'_{24} &= |A_{-1}|^2[Re(T_{0,-1,-1}^1)Re(T_{0,-1,0}^2) + Im(T_{0,-1,-1}^1)Im(T_{0,-1,0}^2)] \\
\omega_{24} &= [(2*1+1)(2*2+1)d_{-1,1}^1 * d_{0,1}^2 * d_{0,-1}^1 * d_{0,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [0\phi_\ell + 0\phi_Z]) \\
A'_{25} &= |A_{-1}|^2[Re(T_{0,-1,-1}^1)Re(T_{1,-1,0}^2) + Im(T_{0,-1,-1}^1)Im(T_{1,-1,0}^2)] \\
\omega_{25} &= [(2*1+1)(2*2+1)d_{-1,1}^1 * d_{0,2}^2 * d_{0,-1}^1 * d_{1,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [-1\phi_\ell + 1\phi_Z]) \\
A'_{26} &= |A_{-1}|^2[Re(T_{0,-1,-1}^1)Re(T_{-1,-1,1}^1) + Im(T_{0,-1,-1}^1)Im(T_{-1,-1,1}^1)] \\
\omega_{26} &= [(2*1+1)(2*1+1)d_{-1,1}^1 * d_{1,0}^1 * d_{0,-1}^1 * d_{-1,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [1\phi_\ell + 0\phi_Z]) \\
A'_{27} &= |A_{-1}|^2[Re(T_{0,-1,-1}^1)Re(T_{0,-1,1}^1) + Im(T_{0,-1,-1}^1)Im(T_{0,-1,1}^1)] \\
\omega_{27} &= [(2*1+1)(2*1+1)d_{-1,1}^1 * d_{1,1}^1 * d_{0,-1}^1 * d_{0,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [0\phi_\ell + 1\phi_Z]) \\
A'_{28} &= |A_{-1}|^2[Re(T_{0,-1,-1}^1)Re(T_{-1,-1,1}^2) + Im(T_{0,-1,-1}^1)Im(T_{-1,-1,1}^2)] \\
\omega_{28} &= [(2*1+1)(2*2+1)d_{-1,1}^1 * d_{1,0}^2 * d_{0,-1}^1 * d_{-1,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [1\phi_\ell + 0\phi_Z]) \\
A'_{29} &= |A_{-1}|^2[Re(T_{0,-1,-1}^1)Re(T_{0,-1,1}^2) + Im(T_{0,-1,-1}^1)Im(T_{0,-1,1}^2)] \\
\omega_{29} &= [(2*1+1)(2*2+1)d_{-1,1}^1 * d_{1,1}^2 * d_{0,-1}^1 * d_{0,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [0\phi_\ell + 1\phi_Z]) \\
A'_{30} &= |A_{-1}|^2[Re(T_{0,-1,-1}^1)Re(T_{1,-1,1}^2) + Im(T_{0,-1,-1}^1)Im(T_{1,-1,1}^2)] \\
\omega_{30} &= [(2*1+1)(2*2+1)d_{-1,1}^1 * d_{1,2}^2 * d_{0,-1}^1 * d_{1,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [-1\phi_\ell + 2\phi_Z]) \\
A'_{31} &= |A_{-1}|^2[Re(T_{-1,-1,-1}^2)Re(T_{-1,-1,-1}^2) + Im(T_{-1,-1,-1}^2)Im(T_{-1,-1,-1}^2)] \\
\omega_{31} &= 2[(2*2+1)(2*2+1)d_{-1,0}^2 * d_{-1,0}^2 * d_{-1,0}^1 * d_{-1,-1}^1] \\
A'_{32} &= |A_{-1}|^2[Re(T_{-1,-1,-1}^2)Re(T_{0,-1,-1}^2) + Im(T_{-1,-1,-1}^2)Im(T_{0,-1,-1}^2)] \\
\omega_{32} &= [(2*2+1)(2*2+1)d_{-1,0}^2 * d_{-1,1}^2 * d_{-1,-1}^1 * d_{0,-1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [0\phi_\ell + -1\phi_Z]) \\
A'_{33} &= |A_{-1}|^2[Re(T_{-1,-1,-1}^2)Re(T_{1,-1,-1}^2) + Im(T_{-1,-1,-1}^2)Im(T_{1,-1,-1}^2)] \\
\omega_{33} &= [(2*2+1)(2*2+1)d_{-1,0}^2 * d_{-1,2}^2 * d_{-1,-1}^1 * d_{1,-1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [-1\phi_\ell + 0\phi_Z]) \\
A'_{34} &= |A_{-1}|^2[Re(T_{-1,-1,-1}^2)Re(T_{-1,-1,0}^0) + Im(T_{-1,-1,-1}^2)Im(T_{-1,-1,0}^0)] \\
\omega_{34} &= [(2*2+1)(2*0+1)d_{-1,0}^2 * d_{0,0}^0 * d_{-1,-1}^1 * d_{-1,-1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [1\phi_\ell + -1\phi_Z]) \\
A'_{35} &= |A_{-1}|^2[Re(T_{-1,-1,-1}^2)Re(T_{-1,-1,0}^1) + Im(T_{-1,-1,-1}^2)Im(T_{-1,-1,0}^1)] \\
\omega_{35} &= [(2*2+1)(2*1+1)d_{-1,0}^2 * d_{0,0}^1 * d_{-1,-1}^1 * d_{-1,-1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [1\phi_\ell + -1\phi_Z]) \\
A'_{36} &= |A_{-1}|^2[Re(T_{-1,-1,-1}^2)Re(T_{0,-1,0}^1) + Im(T_{-1,-1,-1}^2)Im(T_{0,-1,0}^1)] \\
\omega_{36} &= [(2*2+1)(2*1+1)d_{-1,0}^2 * d_{0,1}^1 * d_{-1,-1}^1 * d_{0,-1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [0\phi_\ell + 0\phi_Z])
\end{aligned}$$

$$\begin{aligned}
A'_{37} &= |A_{-1}|^2 [Re(T_{-1,-1,-1}^2)Re(T_{-1,-1,0}^2) + Im(T_{-1,-1,-1}^2)Im(T_{-1,-1,0}^2)] \\
\omega_{37} &= [(2*2+1)(2*2+1)d_{-1,0}^2 * d_{0,0}^2 * d_{-1,-1}^1 * d_{-1,-1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [1\phi_\ell + -1\phi_Z]) \\
A'_{38} &= |A_{-1}|^2 [Re(T_{-1,-1,-1}^2)Re(T_{0,-1,0}^2) + Im(T_{-1,-1,-1}^2)Im(T_{0,-1,0}^2)] \\
\omega_{38} &= [(2*2+1)(2*2+1)d_{-1,0}^2 * d_{0,1}^2 * d_{-1,-1}^1 * d_{0,-1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [0\phi_\ell + 0\phi_Z]) \\
A'_{39} &= |A_{-1}|^2 [Re(T_{-1,-1,-1}^2)Re(T_{1,-1,0}^2) + Im(T_{-1,-1,-1}^2)Im(T_{1,-1,0}^2)] \\
\omega_{39} &= [(2*2+1)(2*2+1)d_{-1,0}^2 * d_{0,2}^2 * d_{-1,-1}^1 * d_{1,-1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [-1\phi_\ell + 1\phi_Z]) \\
A'_{40} &= |A_{-1}|^2 [Re(T_{-1,-1,-1}^2)Re(T_{-1,-1,1}^1) + Im(T_{-1,-1,-1}^2)Im(T_{-1,-1,1}^1)] \\
\omega_{40} &= [(2*2+1)(2*2+1)d_{-1,0}^2 * d_{1,0}^1 * d_{-1,-1}^1 * d_{-1,-1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [1\phi_\ell + 0\phi_Z]) \\
A'_{41} &= |A_{-1}|^2 [Re(T_{-1,-1,-1}^2)Re(T_{0,-1,1}^1) + Im(T_{-1,-1,-1}^2)Im(T_{0,-1,1}^1)] \\
\omega_{41} &= [(2*2+1)(2*2+1)d_{-1,0}^2 * d_{1,1}^1 * d_{-1,-1}^1 * d_{0,-1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [0\phi_\ell + 1\phi_Z]) \\
A'_{42} &= |A_{-1}|^2 [Re(T_{-1,-1,-1}^2)Re(T_{-1,-1,1}^1) + Im(T_{-1,-1,-1}^2)Im(T_{-1,-1,1}^1)] \\
\omega_{42} &= [(2*2+1)(2*2+1)d_{-1,0}^2 * d_{1,0}^2 * d_{-1,-1}^1 * d_{-1,-1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [1\phi_\ell + 0\phi_Z]) \\
A'_{43} &= |A_{-1}|^2 [Re(T_{-1,-1,-1}^2)Re(T_{0,-1,1}^2) + Im(T_{-1,-1,-1}^2)Im(T_{0,-1,1}^2)] \\
\omega_{43} &= [(2*2+1)(2*2+1)d_{-1,0}^2 * d_{1,1}^2 * d_{-1,-1}^1 * d_{0,-1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [0\phi_\ell + 1\phi_Z]) \\
A'_{44} &= |A_{-1}|^2 [Re(T_{-1,-1,-1}^2)Re(T_{1,-1,1}^1) + Im(T_{-1,-1,-1}^2)Im(T_{1,-1,1}^1)] \\
\omega_{44} &= [(2*2+1)(2*2+1)d_{-1,0}^2 * d_{1,2}^2 * d_{-1,-1}^1 * d_{1,-1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [-1\phi_\ell + 2\phi_Z]) \\
A'_{45} &= |A_{-1}|^2 [Re(T_{0,-1,-1}^2)Re(T_{0,-1,-1}^2) + Im(T_{0,-1,-1}^2)Im(T_{0,-1,-1}^2)] \\
\omega_{45} &= 2[(2*2+1)(2*2+1)d_{-1,1}^2 * d_{-1,1}^2 * d_{0,-1}^1 * d_{0,-1}^1] \\
A'_{46} &= |A_{-1}|^2 [Re(T_{0,-1,-1}^2)Re(T_{1,-1,-1}^1) + Im(T_{0,-1,-1}^2)Im(T_{1,-1,-1}^1)] \\
\omega_{46} &= [(2*2+1)(2*2+1)d_{-1,1}^2 * d_{-1,2}^2 * d_{0,-1}^1 * d_{1,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [-1\phi_\ell + 0\phi_Z]) \\
A'_{47} &= |A_{-1}|^2 [Re(T_{0,-1,-1}^2)Re(T_{-1,-1,0}^0) + Im(T_{0,-1,-1}^2)Im(T_{-1,-1,0}^0)] \\
\omega_{47} &= [(2*2+1)(2*0+1)d_{-1,1}^2 * d_{0,0}^0 * d_{0,-1}^1 * d_{-1,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [1\phi_\ell + -1\phi_Z]) \\
A'_{48} &= |A_{-1}|^2 [Re(T_{0,-1,-1}^2)Re(T_{-1,-1,0}^1) + Im(T_{0,-1,-1}^2)Im(T_{-1,-1,0}^1)] \\
\omega_{48} &= [(2*2+1)(2*1+1)d_{-1,1}^2 * d_{0,0}^1 * d_{0,-1}^1 * d_{-1,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [1\phi_\ell + -1\phi_Z]) \\
A'_{49} &= |A_{-1}|^2 [Re(T_{0,-1,-1}^2)Re(T_{0,-1,0}^1) + Im(T_{0,-1,-1}^2)Im(T_{0,-1,0}^1)] \\
\omega_{49} &= [(2*2+1)(2*1+1)d_{-1,1}^2 * d_{0,1}^1 * d_{0,-1}^1 * d_{0,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [0\phi_\ell + 0\phi_Z])
\end{aligned}$$

$$A'_{50} = |A_{-1}|^2 [Re(T_{0,-1,-1}^2)Re(T_{-1,-1,0}^2) + Im(T_{0,-1,-1}^2)Im(T_{-1,-1,0}^2)] \\ \omega_{50} = [(2*2+1)(2*2+1)d_{-1,1}^2 * d_{0,0}^2 * d_{0,-1}^1 * d_{-1,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [1\phi_\ell + -1\phi_Z])$$

$$A'_{51} = |A_{-1}|^2 [Re(T_{0,-1,-1}^2)Re(T_{0,-1,0}^2) + Im(T_{0,-1,-1}^2)Im(T_{0,-1,0}^2)] \\ \omega_{51} = [(2*2+1)(2*2+1)d_{-1,1}^2 * d_{0,1}^2 * d_{0,-1}^1 * d_{-1,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [0\phi_\ell + 0\phi_Z])$$

$$A'_{52} = |A_{-1}|^2 [Re(T_{0,-1,-1}^2)Re(T_{1,-1,0}^2) + Im(T_{0,-1,-1}^2)Im(T_{1,-1,0}^2)] \\ \omega_{52} = [(2*2+1)(2*2+1)d_{-1,1}^2 * d_{0,2}^2 * d_{0,-1}^1 * d_{-1,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [-1\phi_\ell + 1\phi_Z])$$

$$A'_{53} = |A_{-1}|^2 [Re(T_{0,-1,-1}^2)Re(T_{-1,-1,1}^1) + Im(T_{0,-1,-1}^2)Im(T_{-1,-1,1}^1)] \\ \omega_{53} = [(2*2+1)(2*1+1)d_{-1,1}^2 * d_{1,0}^2 * d_{0,-1}^1 * d_{-1,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [1\phi_\ell + 0\phi_Z])$$

$$A'_{54} = |A_{-1}|^2 [Re(T_{0,-1,-1}^2)Re(T_{0,-1,1}^1) + Im(T_{0,-1,-1}^2)Im(T_{0,-1,1}^1)] \\ \omega_{54} = [(2*2+1)(2*1+1)d_{-1,1}^2 * d_{1,1}^1 * d_{0,-1}^1 * d_{0,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{55} = |A_{-1}|^2 [Re(T_{0,-1,-1}^2)Re(T_{-1,-1,1}^2) + Im(T_{0,-1,-1}^2)Im(T_{-1,-1,1}^2)] \\ \omega_{55} = [(2*2+1)(2*2+1)d_{-1,1}^2 * d_{1,0}^2 * d_{0,-1}^1 * d_{-1,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [1\phi_\ell + 0\phi_Z])$$

$$A'_{56} = |A_{-1}|^2 [Re(T_{0,-1,-1}^2)Re(T_{0,-1,1}^2) + Im(T_{0,-1,-1}^2)Im(T_{0,-1,1}^2)] \\ \omega_{56} = [(2*2+1)(2*2+1)d_{-1,1}^2 * d_{1,1}^2 * d_{0,-1}^1 * d_{0,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{57} = |A_{-1}|^2 [Re(T_{0,-1,-1}^2)Re(T_{1,-1,1}^1) + Im(T_{0,-1,-1}^2)Im(T_{1,-1,1}^1)] \\ \omega_{57} = [(2*2+1)(2*2+1)d_{-1,1}^2 * d_{1,2}^2 * d_{0,-1}^1 * d_{-1,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [-1\phi_\ell + 2\phi_Z])$$

$$A'_{58} = |A_{-1}|^2 [Re(T_{1,-1,-1}^2)Re(T_{1,-1,-1}^2) + Im(T_{1,-1,-1}^2)Im(T_{1,-1,-1}^2)] \\ \omega_{58} = 2[(2*2+1)(2*2+1)d_{-1,2}^2 * d_{-1,2}^2 * d_{1,-1}^1 * d_{1,-1}^1]$$

$$A'_{59} = |A_{-1}|^2 [Re(T_{1,-1,-1}^2)Re(T_{-1,-1,0}^0) + Im(T_{1,-1,-1}^2)Im(T_{-1,-1,0}^0)] \\ \omega_{59} = [(2*2+1)(2*0+1)d_{-1,2}^2 * d_{0,0}^0 * d_{1,-1}^1 * d_{-1,-1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [1\phi_\ell + -1\phi_Z])$$

$$A'_{60} = |A_{-1}|^2 [Re(T_{1,-1,-1}^2)Re(T_{-1,-1,0}^1) + Im(T_{1,-1,-1}^2)Im(T_{-1,-1,0}^1)] \\ \omega_{60} = [(2*2+1)(2*1+1)d_{-1,2}^2 * d_{0,0}^1 * d_{1,-1}^1 * d_{-1,-1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [1\phi_\ell + -1\phi_Z])$$

$$A'_{61} = |A_{-1}|^2 [Re(T_{1,-1,-1}^2)Re(T_{0,-1,0}^1) + Im(T_{1,-1,-1}^2)Im(T_{0,-1,0}^1)] \\ \omega_{61} = [(2*2+1)(2*1+1)d_{-1,2}^2 * d_{0,1}^1 * d_{1,-1}^1 * d_{0,-1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [0\phi_\ell + 0\phi_Z])$$

$$A'_{62} = |A_{-1}|^2 [Re(T_{1,-1,-1}^2)Re(T_{-1,-1,0}^2) + Im(T_{1,-1,-1}^2)Im(T_{-1,-1,0}^2)] \\ \omega_{62} = [(2*2+1)(2*2+1)d_{-1,2}^2 * d_{0,0}^2 * d_{1,-1}^1 * d_{-1,-1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [1\phi_\ell + -1\phi_Z])$$

$$A'_{63} = |A_{-1}|^2 [Re(T_{1,-1,-1}^2)Re(T_{0,-1,0}^2) + Im(T_{1,-1,-1}^2)Im(T_{0,-1,0}^2)] \\ \omega_{63} = [(2*2+1)(2*2+1)d_{-1,2}^2 * d_{0,1}^2 * d_{1,-1}^1 * d_{0,-1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [0\phi_\ell + 0\phi_Z])$$

$$\begin{aligned}
A'_{64} &= |A_{-1}|^2 [Re(T_{1,-1,-1}^2)Re(T_{1,-1,0}^2) + Im(T_{1,-1,-1}^2)Im(T_{1,-1,0}^2)] \\
\omega_{64} &= [(2*2+1)(2*2+1)d_{-1,2}^2 * d_{0,2}^2 * d_{1,-1}^1 * d_{1,-1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 1\phi_Z]) \\
A'_{65} &= |A_{-1}|^2 [Re(T_{1,-1,-1}^2)Re(T_{-1,-1,1}^1) + Im(T_{1,-1,-1}^2)Im(T_{-1,-1,1}^1)] \\
\omega_{65} &= [(2*2+1)(2*1+1)d_{-1,2}^2 * d_{1,0}^1 * d_{1,-1}^1 * d_{-1,-1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [1\phi_\ell + 0\phi_Z]) \\
A'_{66} &= |A_{-1}|^2 [Re(T_{1,-1,-1}^2)Re(T_{0,-1,1}^1) + Im(T_{1,-1,-1}^2)Im(T_{0,-1,1}^1)] \\
\omega_{66} &= [(2*2+1)(2*1+1)d_{-1,2}^2 * d_{1,1}^1 * d_{1,-1}^1 * d_{0,-1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [0\phi_\ell + 1\phi_Z]) \\
A'_{67} &= |A_{-1}|^2 [Re(T_{1,-1,-1}^2)Re(T_{-1,-1,1}^2) + Im(T_{1,-1,-1}^2)Im(T_{-1,-1,1}^2)] \\
\omega_{67} &= [(2*2+1)(2*2+1)d_{-1,2}^2 * d_{1,0}^2 * d_{1,-1}^1 * d_{-1,-1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [1\phi_\ell + 0\phi_Z]) \\
A'_{68} &= |A_{-1}|^2 [Re(T_{1,-1,-1}^2)Re(T_{0,-1,1}^2) + Im(T_{1,-1,-1}^2)Im(T_{0,-1,1}^2)] \\
\omega_{68} &= [(2*2+1)(2*2+1)d_{-1,2}^2 * d_{1,1}^2 * d_{1,-1}^1 * d_{0,-1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [0\phi_\ell + 1\phi_Z]) \\
A'_{69} &= |A_{-1}|^2 [Re(T_{1,-1,-1}^2)Re(T_{-1,-1,1}^2) + Im(T_{1,-1,-1}^2)Im(T_{-1,-1,1}^2)] \\
\omega_{69} &= [(2*2+1)(2*2+1)d_{-1,2}^2 * d_{1,2}^2 * d_{1,-1}^1 * d_{-1,-1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 2\phi_Z]) \\
A'_{70} &= |A_{-1}|^2 [Re(T_{-1,-1,0}^0)Re(T_{-1,-1,0}^0) + Im(T_{-1,-1,0}^0)Im(T_{-1,-1,0}^0)] \\
\omega_{70} &= 2[(2*0+1)(2*0+1)d_{0,0}^0 * d_{0,0}^0 * d_{-1,-1}^1 * d_{-1,-1}^1] \\
A'_{71} &= |A_{-1}|^2 [Re(T_{-1,-1,0}^0)Re(T_{-1,-1,0}^1) + Im(T_{-1,-1,0}^0)Im(T_{-1,-1,0}^1)] \\
\omega_{71} &= [(2*0+1)(2*1+1)d_{0,0}^0 * d_{0,0}^1 * d_{-1,-1}^1 * d_{-1,-1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [1\phi_\ell + -1\phi_Z]) \\
A'_{72} &= |A_{-1}|^2 [Re(T_{-1,-1,0}^0)Re(T_{0,-1,0}^1) + Im(T_{-1,-1,0}^0)Im(T_{0,-1,0}^1)] \\
\omega_{72} &= [(2*0+1)(2*1+1)d_{0,0}^0 * d_{0,1}^1 * d_{-1,-1}^1 * d_{0,-1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [0\phi_\ell + 0\phi_Z]) \\
A'_{73} &= |A_{-1}|^2 [Re(T_{-1,-1,0}^0)Re(T_{-1,-1,0}^2) + Im(T_{-1,-1,0}^0)Im(T_{-1,-1,0}^2)] \\
\omega_{73} &= [(2*0+1)(2*2+1)d_{0,0}^0 * d_{0,0}^2 * d_{-1,-1}^1 * d_{-1,-1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [1\phi_\ell + -1\phi_Z]) \\
A'_{74} &= |A_{-1}|^2 [Re(T_{-1,-1,0}^0)Re(T_{0,-1,0}^2) + Im(T_{-1,-1,0}^0)Im(T_{0,-1,0}^2)] \\
\omega_{74} &= [(2*0+1)(2*2+1)d_{0,0}^0 * d_{0,1}^2 * d_{-1,-1}^1 * d_{0,-1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [0\phi_\ell + 0\phi_Z]) \\
A'_{75} &= |A_{-1}|^2 [Re(T_{-1,-1,0}^0)Re(T_{1,-1,0}^2) + Im(T_{-1,-1,0}^0)Im(T_{1,-1,0}^2)] \\
\omega_{75} &= [(2*0+1)(2*2+1)d_{0,0}^0 * d_{0,2}^2 * d_{-1,-1}^1 * d_{1,-1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [-1\phi_\ell + 1\phi_Z]) \\
A'_{76} &= |A_{-1}|^2 [Re(T_{-1,-1,0}^0)Re(T_{-1,-1,1}^1) + Im(T_{-1,-1,0}^0)Im(T_{-1,-1,1}^1)] \\
\omega_{76} &= [(2*0+1)(2*1+1)d_{0,0}^0 * d_{1,0}^1 * d_{-1,-1}^1 * d_{-1,-1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [1\phi_\ell + 0\phi_Z]) \\
A'_{77} &= |A_{-1}|^2 [Re(T_{-1,-1,0}^0)Re(T_{0,-1,1}^1) + Im(T_{-1,-1,0}^0)Im(T_{0,-1,1}^1)] \\
\omega_{77} &= [(2*0+1)(2*1+1)d_{0,0}^0 * d_{1,1}^1 * d_{-1,-1}^1 * d_{0,-1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [0\phi_\ell + 1\phi_Z]) \\
A'_{78} &= |A_{-1}|^2 [Re(T_{-1,-1,0}^0)Re(T_{-1,-1,1}^2) + Im(T_{-1,-1,0}^0)Im(T_{-1,-1,1}^2)]
\end{aligned}$$

$$\omega_{78} = [(2*0+1)(2*2+1)d_{0,0}^0 * d_{1,0}^2 * d_{-1,-1}^1 * d_{-1,-1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [1\phi_\ell + 0\phi_Z])$$

$$A'_{79} = |A_{-1}|^2 [Re(T_{-1,-1,0}^0)Re(T_{0,-1,1}^2) + Im(T_{-1,-1,0}^0)Im(T_{0,-1,1}^2)] \\ \omega_{79} = [(2*0+1)(2*2+1)d_{0,0}^0 * d_{1,1}^2 * d_{-1,-1}^1 * d_{0,-1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{80} = |A_{-1}|^2 [Re(T_{-1,-1,0}^0)Re(T_{1,-1,1}^2) + Im(T_{-1,-1,0}^0)Im(T_{1,-1,1}^2)] \\ \omega_{80} = [(2*0+1)(2*2+1)d_{0,0}^0 * d_{1,2}^2 * d_{-1,-1}^1 * d_{1,-1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [-1\phi_\ell + 2\phi_Z])$$

$$A'_{81} = |A_{-1}|^2 [Re(T_{-1,-1,0}^1)Re(T_{-1,-1,0}^1) + Im(T_{-1,-1,0}^1)Im(T_{-1,-1,0}^1)] \\ \omega_{81} = 2[(2*1+1)(2*1+1)d_{0,0}^1 * d_{0,0}^1 * d_{-1,-1}^1 * d_{-1,-1}^1]$$

$$A'_{82} = |A_{-1}|^2 [Re(T_{-1,-1,0}^1)Re(T_{0,-1,0}^1) + Im(T_{-1,-1,0}^1)Im(T_{0,-1,0}^1)] \\ \omega_{82} = [(2*1+1)(2*1+1)d_{0,0}^1 * d_{0,1}^1 * d_{-1,-1}^1 * d_{0,-1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [0\phi_\ell + 0\phi_Z])$$

$$A'_{83} = |A_{-1}|^2 [Re(T_{-1,-1,0}^1)Re(T_{-1,-1,0}^2) + Im(T_{-1,-1,0}^1)Im(T_{-1,-1,0}^2)] \\ \omega_{83} = [(2*1+1)(2*2+1)d_{0,0}^1 * d_{0,0}^2 * d_{-1,-1}^1 * d_{-1,-1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [1\phi_\ell + -1\phi_Z])$$

$$A'_{84} = |A_{-1}|^2 [Re(T_{-1,-1,0}^1)Re(T_{0,-1,0}^2) + Im(T_{-1,-1,0}^1)Im(T_{0,-1,0}^2)] \\ \omega_{84} = [(2*1+1)(2*2+1)d_{0,0}^1 * d_{0,1}^2 * d_{-1,-1}^1 * d_{0,-1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [0\phi_\ell + 0\phi_Z])$$

$$A'_{85} = |A_{-1}|^2 [Re(T_{-1,-1,0}^1)Re(T_{1,-1,0}^2) + Im(T_{-1,-1,0}^1)Im(T_{1,-1,0}^2)] \\ \omega_{85} = [(2*1+1)(2*2+1)d_{0,0}^1 * d_{0,2}^2 * d_{-1,-1}^1 * d_{1,-1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [-1\phi_\ell + 1\phi_Z])$$

$$A'_{86} = |A_{-1}|^2 [Re(T_{-1,-1,0}^1)Re(T_{-1,-1,1}^1) + Im(T_{-1,-1,0}^1)Im(T_{-1,-1,1}^1)] \\ \omega_{86} = [(2*1+1)(2*1+1)d_{0,0}^1 * d_{1,0}^1 * d_{-1,-1}^1 * d_{-1,-1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [1\phi_\ell + 0\phi_Z])$$

$$A'_{87} = |A_{-1}|^2 [Re(T_{-1,-1,0}^1)Re(T_{0,-1,1}^1) + Im(T_{-1,-1,0}^1)Im(T_{0,-1,1}^1)] \\ \omega_{87} = [(2*1+1)(2*1+1)d_{0,0}^1 * d_{1,1}^1 * d_{-1,-1}^1 * d_{0,-1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{88} = |A_{-1}|^2 [Re(T_{-1,-1,0}^1)Re(T_{-2,-1,1}^2) + Im(T_{-1,-1,0}^1)Im(T_{-2,-1,1}^2)] \\ \omega_{88} = [(2*1+1)(2*2+1)d_{0,0}^1 * d_{1,0}^2 * d_{-1,-1}^1 * d_{-1,-1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [1\phi_\ell + 0\phi_Z])$$

$$A'_{89} = |A_{-1}|^2 [Re(T_{-1,-1,0}^1)Re(T_{0,-1,1}^2) + Im(T_{-1,-1,0}^1)Im(T_{0,-1,1}^2)] \\ \omega_{89} = [(2*1+1)(2*2+1)d_{0,0}^1 * d_{1,1}^2 * d_{-1,-1}^1 * d_{0,-1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{90} = |A_{-1}|^2 [Re(T_{-1,-1,0}^1)Re(T_{1,-1,1}^2) + Im(T_{-1,-1,0}^1)Im(T_{1,-1,1}^2)] \\ \omega_{90} = [(2*1+1)(2*2+1)d_{0,0}^1 * d_{1,2}^2 * d_{-1,-1}^1 * d_{1,-1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [-1\phi_\ell + 2\phi_Z])$$

$$A'_{91} = |A_{-1}|^2 [Re(T_{0,-1,0}^1)Re(T_{0,-1,0}^1) + Im(T_{0,-1,0}^1)Im(T_{0,-1,0}^1)] \\ \omega_{91} = 2[(2*1+1)(2*1+1)d_{0,1}^1 * d_{0,1}^1 * d_{0,-1}^1 * d_{0,-1}^1]$$

$$A'_{92} = |A_{-1}|^2 [Re(T_{0,-1,0}^1)Re(T_{-1,-1,0}^2) + Im(T_{0,-1,0}^1)Im(T_{-1,-1,0}^2)] \\ \omega_{92} = [(2*1+1)(2*2+1)d_{0,1}^1 * d_{0,0}^2 * d_{0,-1}^1 * d_{-1,-1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [1\phi_\ell + -1\phi_Z])$$

$$A'_{93} = |A_{-1}|^2 [Re(T_{0,-1,0}^1)Re(T_{0,-1,0}^2) + Im(T_{0,-1,0}^1)Im(T_{0,-1,0}^2)]$$

$$\omega_{93} = [(2*1+1)(2*2+1)d_{0,1}^1 * d_{0,1}^2 * d_{0,-1}^1 * d_{0,-1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [0\phi_\ell + 0\phi_Z])$$

$$A'_{94} = |A_{-1}|^2 [Re(T_{0,-1,0}^1)Re(T_{1,-1,0}^2) + Im(T_{0,-1,0}^1)Im(T_{1,-1,0}^2)] \\ \omega_{94} = [(2*1+1)(2*2+1)d_{0,1}^1 * d_{0,2}^2 * d_{0,-1}^1 * d_{1,-1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 1\phi_Z])$$

$$A'_{95} = |A_{-1}|^2 [Re(T_{0,-1,0}^1)Re(T_{-1,-1,1}^1) + Im(T_{0,-1,0}^1)Im(T_{-1,-1,1}^1)] \\ \omega_{95} = [(2*1+1)(2*1+1)d_{0,1}^1 * d_{1,0}^1 * d_{0,-1}^1 * d_{-1,-1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [1\phi_\ell + 0\phi_Z])$$

$$A'_{96} = |A_{-1}|^2 [Re(T_{0,-1,0}^1)Re(T_{0,-1,1}^1) + Im(T_{0,-1,0}^1)Im(T_{0,-1,1}^1)] \\ \omega_{96} = [(2*1+1)(2*1+1)d_{0,1}^1 * d_{1,1}^1 * d_{0,-1}^1 * d_{0,-1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{97} = |A_{-1}|^2 [Re(T_{0,-1,0}^1)Re(T_{-1,-1,1}^2) + Im(T_{0,-1,0}^1)Im(T_{-1,-1,1}^2)] \\ \omega_{97} = [(2*1+1)(2*2+1)d_{0,1}^1 * d_{1,0}^1 * d_{0,-1}^1 * d_{-1,-1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [1\phi_\ell + 0\phi_Z])$$

$$A'_{98} = |A_{-1}|^2 [Re(T_{0,-1,0}^1)Re(T_{0,-1,1}^2) + Im(T_{0,-1,0}^1)Im(T_{0,-1,1}^2)] \\ \omega_{98} = [(2*1+1)(2*2+1)d_{0,1}^1 * d_{1,1}^2 * d_{0,-1}^1 * d_{0,-1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{99} = |A_{-1}|^2 [Re(T_{0,-1,0}^1)Re(T_{1,-1,1}^2) + Im(T_{0,-1,0}^1)Im(T_{1,-1,1}^2)] \\ \omega_{99} = [(2*1+1)(2*2+1)d_{0,1}^1 * d_{1,2}^1 * d_{0,-1}^1 * d_{1,-1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 2\phi_Z])$$

$$A'_{100} = |A_{-1}|^2 [Re(T_{-1,-1,0}^2)Re(T_{-1,-1,0}^2) + Im(T_{-1,-1,0}^2)Im(T_{-1,-1,0}^2)] \\ \omega_{100} = 2[(2*2+1)(2*2+1)d_{0,0}^2 * d_{0,0}^2 * d_{-1,-1}^1 * d_{-1,-1}^1]$$

$$A'_{101} = |A_{-1}|^2 [Re(T_{-1,-1,0}^2)Re(T_{0,-1,0}^2) + Im(T_{-1,-1,0}^2)Im(T_{0,-1,0}^2)] \\ \omega_{101} = [(2*2+1)(2*2+1)d_{0,0}^2 * d_{0,1}^2 * d_{-1,-1}^1 * d_{0,-1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [0\phi_\ell + 0\phi_Z])$$

$$A'_{102} = |A_{-1}|^2 [Re(T_{-1,-1,0}^2)Re(T_{1,-1,0}^2) + Im(T_{-1,-1,0}^2)Im(T_{1,-1,0}^2)] \\ \omega_{102} = [(2*2+1)(2*2+1)d_{0,0}^2 * d_{0,2}^2 * d_{-1,-1}^1 * d_{1,-1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [-1\phi_\ell + 1\phi_Z])$$

$$A'_{103} = |A_{-1}|^2 [Re(T_{-1,-1,0}^2)Re(T_{-1,-1,1}^1) + Im(T_{-1,-1,0}^2)Im(T_{-1,-1,1}^1)] \\ \omega_{103} = [(2*2+1)(2*1+1)d_{0,0}^2 * d_{1,0}^1 * d_{-1,-1}^1 * d_{-1,-1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [1\phi_\ell + 0\phi_Z])$$

$$A'_{104} = |A_{-1}|^2 [Re(T_{-1,-1,0}^2)Re(T_{0,-1,1}^1) + Im(T_{-1,-1,0}^2)Im(T_{0,-1,1}^1)] \\ \omega_{104} = [(2*2+1)(2*1+1)d_{0,0}^2 * d_{1,1}^1 * d_{-1,-1}^1 * d_{0,-1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{105} = |A_{-1}|^2 [Re(T_{-1,-1,0}^2)Re(T_{-1,-1,1}^1) + Im(T_{-1,-1,0}^2)Im(T_{-1,-1,1}^1)] \\ \omega_{105} = [(2*2+1)(2*2+1)d_{0,0}^2 * d_{1,0}^2 * d_{-1,-1}^1 * d_{-1,-1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [1\phi_\ell + 0\phi_Z])$$

$$A'_{106} = |A_{-1}|^2 [Re(T_{-1,-1,0}^2)Re(T_{0,-1,1}^2) + Im(T_{-1,-1,0}^2)Im(T_{0,-1,1}^2)] \\ \omega_{106} = [(2*2+1)(2*2+1)d_{0,0}^2 * d_{1,1}^2 * d_{-1,-1}^1 * d_{0,-1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{107} = |A_{-1}|^2 [Re(T_{-1,-1,0}^2)Re(T_{1,-1,1}^2) + Im(T_{-1,-1,0}^2)Im(T_{1,-1,1}^2)] \\ \omega_{107} = [(2*2+1)(2*2+1)d_{0,0}^2 * d_{1,2}^2 * d_{-1,-1}^1 * d_{1,-1}^1] * \cos([1\phi_\ell + -1\phi_Z] -$$

$$[-1\phi_\ell + 2\phi_Z])$$

$$\begin{aligned} A'_{108} &= |A_{-1}|^2 [Re(T_{0,-1,0}^2)Re(T_{0,-1,0}^2) + Im(T_{0,-1,0}^2)Im(T_{0,-1,0}^2)] \\ \omega_{108} &= 2[(2*2+1)(2*2+1)d_{0,1}^2 * d_{0,1}^2 * d_{0,-1}^1 * d_{0,-1}^1] \end{aligned}$$

$$\begin{aligned} A'_{109} &= |A_{-1}|^2 [Re(T_{0,-1,0}^2)Re(T_{1,-1,0}^2) + Im(T_{0,-1,0}^2)Im(T_{1,-1,0}^2)] \\ \omega_{109} &= [(2*2+1)(2*2+1)d_{0,1}^2 * d_{0,2}^2 * d_{0,-1}^1 * d_{1,-1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 1\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{110} &= |A_{-1}|^2 [Re(T_{0,-1,0}^2)Re(T_{-1,-1,1}^1) + Im(T_{0,-1,0}^2)Im(T_{-1,-1,1}^1)] \\ \omega_{110} &= [(2*2+1)(2*1+1)d_{0,1}^2 * d_{1,0}^1 * d_{0,-1}^1 * d_{-1,-1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [1\phi_\ell + 0\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{111} &= |A_{-1}|^2 [Re(T_{0,-1,0}^2)Re(T_{0,-1,1}^1) + Im(T_{0,-1,0}^2)Im(T_{0,-1,1}^1)] \\ \omega_{111} &= [(2*2+1)(2*1+1)d_{0,1}^2 * d_{1,1}^1 * d_{0,-1}^1 * d_{0,-1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [0\phi_\ell + 1\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{112} &= |A_{-1}|^2 [Re(T_{0,-1,0}^2)Re(T_{-1,-1,1}^1) + Im(T_{0,-1,0}^2)Im(T_{-1,-1,1}^1)] \\ \omega_{112} &= [(2*2+1)(2*2+1)d_{0,1}^2 * d_{1,0}^2 * d_{0,-1}^1 * d_{-1,-1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [1\phi_\ell + 0\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{113} &= |A_{-1}|^2 [Re(T_{0,-1,0}^2)Re(T_{0,-1,1}^2) + Im(T_{0,-1,0}^2)Im(T_{0,-1,1}^2)] \\ \omega_{113} &= [(2*2+1)(2*2+1)d_{0,1}^2 * d_{1,1}^2 * d_{0,-1}^1 * d_{0,-1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [0\phi_\ell + 1\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{114} &= |A_{-1}|^2 [Re(T_{0,-1,0}^2)Re(T_{1,-1,1}^2) + Im(T_{0,-1,0}^2)Im(T_{1,-1,1}^2)] \\ \omega_{114} &= [(2*2+1)(2*2+1)d_{0,1}^2 * d_{1,2}^2 * d_{0,-1}^1 * d_{1,-1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 2\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{115} &= |A_{-1}|^2 [Re(T_{1,-1,0}^2)Re(T_{1,-1,0}^2) + Im(T_{1,-1,0}^2)Im(T_{1,-1,0}^2)] \\ \omega_{115} &= 2[(2*2+1)(2*2+1)d_{0,2}^2 * d_{0,2}^2 * d_{1,-1}^1 * d_{1,-1}^1] \end{aligned}$$

$$\begin{aligned} A'_{116} &= |A_{-1}|^2 [Re(T_{1,-1,0}^2)Re(T_{-1,-1,1}^1) + Im(T_{1,-1,0}^2)Im(T_{-1,-1,1}^1)] \\ \omega_{116} &= [(2*2+1)(2*1+1)d_{0,2}^2 * d_{1,0}^1 * d_{1,-1}^1 * d_{-1,-1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [1\phi_\ell + 0\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{117} &= |A_{-1}|^2 [Re(T_{1,-1,0}^2)Re(T_{0,-1,1}^1) + Im(T_{1,-1,0}^2)Im(T_{0,-1,1}^1)] \\ \omega_{117} &= [(2*2+1)(2*1+1)d_{0,2}^2 * d_{1,1}^1 * d_{1,-1}^1 * d_{0,-1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [0\phi_\ell + 1\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{118} &= |A_{-1}|^2 [Re(T_{1,-1,0}^2)Re(T_{-1,-1,1}^1) + Im(T_{1,-1,0}^2)Im(T_{-1,-1,1}^1)] \\ \omega_{118} &= [(2*2+1)(2*2+1)d_{0,2}^2 * d_{1,0}^2 * d_{1,-1}^1 * d_{-1,-1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [1\phi_\ell + 0\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{119} &= |A_{-1}|^2 [Re(T_{1,-1,0}^2)Re(T_{0,-1,1}^2) + Im(T_{1,-1,0}^2)Im(T_{0,-1,1}^2)] \\ \omega_{119} &= [(2*2+1)(2*2+1)d_{0,2}^2 * d_{1,1}^2 * d_{1,-1}^1 * d_{0,-1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [0\phi_\ell + 1\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{120} &= |A_{-1}|^2 [Re(T_{1,-1,0}^2)Re(T_{1,-1,1}^2) + Im(T_{1,-1,0}^2)Im(T_{1,-1,1}^2)] \\ \omega_{120} &= [(2*2+1)(2*2+1)d_{0,2}^2 * d_{1,2}^2 * d_{1,-1}^1 * d_{-1,-1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [-1\phi_\ell + 2\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{121} &= |A_{-1}|^2 [Re(T_{-1,-1,1}^1)Re(T_{-1,-1,1}^1) + Im(T_{-1,-1,1}^1)Im(T_{-1,-1,1}^1)] \\ \omega_{121} &= 2[(2*1+1)(2*1+1)d_{1,0}^1 * d_{1,0}^1 * d_{-1,-1}^1 * d_{-1,-1}^1] \end{aligned}$$

$$\begin{aligned} A'_{122} &= |A_{-1}|^2 [Re(T_{-1,-1,1}^1)Re(T_{0,-1,1}^1) + Im(T_{-1,-1,1}^1)Im(T_{0,-1,1}^1)] \\ \omega_{122} &= [(2*1+1)(2*1+1)d_{1,0}^1 * d_{1,1}^1 * d_{-1,-1}^1 * d_{0,-1}^1] * \cos([1\phi_\ell + 0\phi_Z] - [0\phi_\ell + 1\phi_Z]) \end{aligned}$$

$$\begin{aligned}
A'_{123} &= |A_{-1}|^2 [Re(T_{-1,-1,1}^1)Re(T_{-1,-1,1}^2) + Im(T_{-1,-1,1}^1)Im(T_{-1,-1,1}^2)] \\
\omega_{123} &= [(2*1+1)(2*2+1)d_{1,0}^1 * d_{1,0}^2 * d_{-1,-1}^1 * d_{-1,-1}^2] * \cos([1\phi_\ell + 0\phi_Z] - [1\phi_\ell + 0\phi_Z]) \\
A'_{124} &= |A_{-1}|^2 [Re(T_{-1,-1,1}^1)Re(T_{0,-1,1}^2) + Im(T_{-1,-1,1}^1)Im(T_{0,-1,1}^2)] \\
\omega_{124} &= [(2*1+1)(2*2+1)d_{1,0}^1 * d_{1,1}^2 * d_{-1,-1}^1 * d_{0,-1}^1] * \cos([1\phi_\ell + 0\phi_Z] - [0\phi_\ell + 1\phi_Z]) \\
A'_{125} &= |A_{-1}|^2 [Re(T_{-1,-1,1}^1)Re(T_{1,-1,1}^2) + Im(T_{-1,-1,1}^1)Im(T_{1,-1,1}^2)] \\
\omega_{125} &= [(2*1+1)(2*2+1)d_{1,0}^1 * d_{1,2}^2 * d_{-1,-1}^1 * d_{1,-1}^1] * \cos([1\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 2\phi_Z]) \\
A'_{126} &= |A_{-1}|^2 [Re(T_{0,-1,1}^1)Re(T_{0,-1,1}^1) + Im(T_{0,-1,1}^1)Im(T_{0,-1,1}^1)] \\
\omega_{126} &= 2[(2*1+1)(2*1+1)d_{1,1}^1 * d_{1,1}^1 * d_{0,-1}^1 * d_{0,-1}^1] \\
A'_{127} &= |A_{-1}|^2 [Re(T_{0,-1,1}^1)Re(T_{-1,-1,1}^2) + Im(T_{0,-1,1}^1)Im(T_{-1,-1,1}^2)] \\
\omega_{127} &= [(2*1+1)(2*2+1)d_{1,1}^1 * d_{1,0}^2 * d_{0,-1}^1 * d_{-1,-1}^1] * \cos([0\phi_\ell + 1\phi_Z] - [1\phi_\ell + 0\phi_Z]) \\
A'_{128} &= |A_{-1}|^2 [Re(T_{0,-1,1}^1)Re(T_{0,-1,1}^2) + Im(T_{0,-1,1}^1)Im(T_{0,-1,1}^2)] \\
\omega_{128} &= [(2*1+1)(2*2+1)d_{1,1}^1 * d_{1,1}^2 * d_{0,-1}^1 * d_{0,-1}^1] * \cos([0\phi_\ell + 1\phi_Z] - [0\phi_\ell + 1\phi_Z]) \\
A'_{129} &= |A_{-1}|^2 [Re(T_{0,-1,1}^1)Re(T_{1,-1,1}^2) + Im(T_{0,-1,1}^1)Im(T_{1,-1,1}^2)] \\
\omega_{129} &= [(2*1+1)(2*2+1)d_{1,1}^1 * d_{1,2}^2 * d_{0,-1}^1 * d_{1,-1}^1] * \cos([0\phi_\ell + 1\phi_Z] - [-1\phi_\ell + 2\phi_Z]) \\
A'_{130} &= |A_{-1}|^2 [Re(T_{-1,-1,1}^2)Re(T_{-1,-1,1}^2) + Im(T_{-1,-1,1}^2)Im(T_{-1,-1,1}^2)] \\
\omega_{130} &= 2[(2*2+1)(2*2+1)d_{1,0}^2 * d_{1,0}^2 * d_{-1,-1}^1 * d_{-1,-1}^1] \\
A'_{131} &= |A_{-1}|^2 [Re(T_{-1,-1,1}^2)Re(T_{0,-1,1}^2) + Im(T_{-1,-1,1}^2)Im(T_{0,-1,1}^2)] \\
\omega_{131} &= [(2*2+1)(2*2+1)d_{1,0}^2 * d_{1,1}^2 * d_{-1,-1}^1 * d_{0,-1}^1] * \cos([1\phi_\ell + 0\phi_Z] - [0\phi_\ell + 1\phi_Z]) \\
A'_{132} &= |A_{-1}|^2 [Re(T_{-1,-1,1}^2)Re(T_{1,-1,1}^2) + Im(T_{-1,-1,1}^2)Im(T_{1,-1,1}^2)] \\
\omega_{132} &= [(2*2+1)(2*2+1)d_{1,0}^2 * d_{1,2}^2 * d_{-1,-1}^1 * d_{1,-1}^1] * \cos([1\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 2\phi_Z]) \\
A'_{133} &= |A_{-1}|^2 [Re(T_{0,-1,1}^2)Re(T_{0,-1,1}^2) + Im(T_{0,-1,1}^2)Im(T_{0,-1,1}^2)] \\
\omega_{133} &= 2[(2*2+1)(2*2+1)d_{1,1}^2 * d_{1,1}^2 * d_{0,-1}^1 * d_{0,-1}^1] \\
A'_{134} &= |A_{-1}|^2 [Re(T_{0,-1,1}^2)Re(T_{1,-1,1}^2) + Im(T_{0,-1,1}^2)Im(T_{1,-1,1}^2)] \\
\omega_{134} &= [(2*2+1)(2*2+1)d_{1,1}^2 * d_{1,2}^2 * d_{0,-1}^1 * d_{1,-1}^1] * \cos([0\phi_\ell + 1\phi_Z] - [-1\phi_\ell + 2\phi_Z]) \\
A'_{135} &= |A_{-1}|^2 [Re(T_{1,-1,1}^2)Re(T_{1,-1,1}^2) + Im(T_{1,-1,1}^2)Im(T_{1,-1,1}^2)] \\
\omega_{135} &= 2[(2*2+1)(2*2+1)d_{1,2}^2 * d_{1,2}^2 * d_{1,-1}^1 * d_{1,-1}^1] \\
A'_{136} &= |A_1|^2 [Re(T_{-1,-1,-1}^1)Re(T_{-1,-1,-1}^1) + Im(T_{-1,-1,-1}^1)Im(T_{-1,-1,-1}^1)] \\
\omega_{136} &= 2[(2*1+1)(2*1+1)d_{-1,0}^1 * d_{-1,0}^1 * d_{-1,-1}^1 * d_{-1,-1}^1] \\
A'_{137} &= |A_1|^2 [Re(T_{-1,-1,-1}^1)Re(T_{0,-1,-1}^1) + Im(T_{-1,-1,-1}^1)Im(T_{0,-1,-1}^1)] \\
\omega_{137} &= [(2*1+1)(2*1+1)d_{-1,0}^1 * d_{-1,1}^1 * d_{-1,1}^1 * d_{0,1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [0\phi_\ell + -1\phi_Z])
\end{aligned}$$

$$\begin{aligned}
A'_{138} &= |A_1|^2 [Re(T_{-1,-1,-1}^1)Re(T_{-1,-1,-1}^2) + Im(T_{-1,-1,-1}^1)Im(T_{-1,-1,-1}^2)] \\
\omega_{138} &= [(2*1+1)(2*2+1)d_{-1,0}^1 * d_{-1,0}^2 * d_{-1,1}^1 * d_{-1,1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [1\phi_\ell + -2\phi_Z]) \\
A'_{139} &= |A_1|^2 [Re(T_{-1,-1,-1}^1)Re(T_{0,-1,-1}^2) + Im(T_{-1,-1,-1}^1)Im(T_{0,-1,-1}^2)] \\
\omega_{139} &= [(2*1+1)(2*2+1)d_{-1,0}^1 * d_{-1,1}^2 * d_{-1,1}^1 * d_{0,1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [0\phi_\ell + -1\phi_Z]) \\
A'_{140} &= |A_1|^2 [Re(T_{-1,-1,-1}^1)Re(T_{1,-1,-1}^2) + Im(T_{-1,-1,-1}^1)Im(T_{1,-1,-1}^2)] \\
\omega_{140} &= [(2*1+1)(2*2+1)d_{-1,0}^1 * d_{-1,2}^2 * d_{-1,1}^1 * d_{1,1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [-1\phi_\ell + 0\phi_Z]) \\
A'_{141} &= |A_1|^2 [Re(T_{-1,-1,-1}^1)Re(T_{-1,-1,0}^0) + Im(T_{-1,-1,-1}^1)Im(T_{-1,-1,0}^0)] \\
\omega_{141} &= [(2*1+1)(2*0+1)d_{-1,0}^1 * d_{0,0}^0 * d_{-1,1}^1 * d_{-1,1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [1\phi_\ell + -1\phi_Z]) \\
A'_{142} &= |A_1|^2 [Re(T_{-1,-1,-1}^1)Re(T_{-1,-1,0}^1) + Im(T_{-1,-1,-1}^1)Im(T_{-1,-1,0}^1)] \\
\omega_{142} &= [(2*1+1)(2*1+1)d_{-1,0}^1 * d_{0,0}^1 * d_{-1,1}^1 * d_{-1,1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [1\phi_\ell + -1\phi_Z]) \\
A'_{143} &= |A_1|^2 [Re(T_{-1,-1,-1}^1)Re(T_{0,-1,0}^1) + Im(T_{-1,-1,-1}^1)Im(T_{0,-1,0}^1)] \\
\omega_{143} &= [(2*1+1)(2*1+1)d_{-1,0}^1 * d_{0,1}^1 * d_{-1,1}^1 * d_{0,1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [0\phi_\ell + 0\phi_Z]) \\
A'_{144} &= |A_1|^2 [Re(T_{-1,-1,-1}^1)Re(T_{-1,-1,0}^2) + Im(T_{-1,-1,-1}^1)Im(T_{-1,-1,0}^2)] \\
\omega_{144} &= [(2*1+1)(2*2+1)d_{-1,0}^1 * d_{0,0}^2 * d_{-1,1}^1 * d_{-1,1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [1\phi_\ell + -1\phi_Z]) \\
A'_{145} &= |A_1|^2 [Re(T_{-1,-1,-1}^1)Re(T_{0,-1,0}^2) + Im(T_{-1,-1,-1}^1)Im(T_{0,-1,0}^2)] \\
\omega_{145} &= [(2*1+1)(2*2+1)d_{-1,0}^1 * d_{0,1}^2 * d_{-1,1}^1 * d_{0,1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [0\phi_\ell + 0\phi_Z]) \\
A'_{146} &= |A_1|^2 [Re(T_{-1,-1,-1}^1)Re(T_{-1,-1,0}^2) + Im(T_{-1,-1,-1}^1)Im(T_{-1,-1,0}^2)] \\
\omega_{146} &= [(2*1+1)(2*2+1)d_{-1,0}^1 * d_{0,2}^2 * d_{-1,1}^1 * d_{1,1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [-1\phi_\ell + 1\phi_Z]) \\
A'_{147} &= |A_1|^2 [Re(T_{-1,-1,-1}^1)Re(T_{-1,-1,1}^1) + Im(T_{-1,-1,-1}^1)Im(T_{-1,-1,1}^1)] \\
\omega_{147} &= [(2*1+1)(2*1+1)d_{-1,0}^1 * d_{1,0}^1 * d_{-1,1}^1 * d_{-1,1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [1\phi_\ell + 0\phi_Z]) \\
A'_{148} &= |A_1|^2 [Re(T_{-1,-1,-1}^1)Re(T_{0,-1,1}^1) + Im(T_{-1,-1,-1}^1)Im(T_{0,-1,1}^1)] \\
\omega_{148} &= [(2*1+1)(2*1+1)d_{-1,0}^1 * d_{1,1}^1 * d_{-1,1}^1 * d_{0,1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [0\phi_\ell + 1\phi_Z]) \\
A'_{149} &= |A_1|^2 [Re(T_{-1,-1,-1}^1)Re(T_{-1,-1,1}^1) + Im(T_{-1,-1,-1}^1)Im(T_{-1,-1,1}^1)] \\
\omega_{149} &= [(2*1+1)(2*2+1)d_{-1,0}^1 * d_{1,0}^2 * d_{-1,1}^1 * d_{-1,1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [1\phi_\ell + 0\phi_Z]) \\
A'_{150} &= |A_1|^2 [Re(T_{-1,-1,-1}^1)Re(T_{0,-1,1}^2) + Im(T_{-1,-1,-1}^1)Im(T_{0,-1,1}^2)] \\
\omega_{150} &= [(2*1+1)(2*2+1)d_{-1,0}^1 * d_{1,1}^2 * d_{-1,1}^1 * d_{0,1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [0\phi_\ell + 1\phi_Z])
\end{aligned}$$

$$\begin{aligned}
A'_{151} &= |A_1|^2 [Re(T^1_{-1,-1,-1})Re(T^2_{-1,-1,1}) + Im(T^1_{-1,-1,-1})Im(T^2_{1,-1,1})] \\
\omega_{151} &= [(2*1+1)(2*2+1)d^1_{-1,0}*d^2_{1,2}*d^1_{-1,1}*d^1_{1,1}]*\cos([1\phi_\ell + -2\phi_Z] - [-1\phi_\ell + 2\phi_Z]) \\
A'_{152} &= |A_1|^2 [Re(T^1_{0,-1,-1})Re(T^1_{0,-1,-1}) + Im(T^1_{0,-1,-1})Im(T^1_{0,-1,-1})] \\
\omega_{152} &= 2[(2*1+1)(2*1+1)d^1_{-1,1}*d^1_{-1,1}*d^1_{0,1}*d^1_{0,1}] \\
A'_{153} &= |A_1|^2 [Re(T^1_{0,-1,-1})Re(T^2_{-1,-1,-1}) + Im(T^1_{0,-1,-1})Im(T^2_{-1,-1,-1})] \\
\omega_{153} &= [(2*1+1)(2*2+1)d^1_{-1,1}*d^2_{-1,0}*d^1_{0,1}*d^1_{-1,1}]*\cos([0\phi_\ell + -1\phi_Z] - [1\phi_\ell + -2\phi_Z]) \\
A'_{154} &= |A_1|^2 [Re(T^1_{0,-1,-1})Re(T^2_{0,-1,-1}) + Im(T^1_{0,-1,-1})Im(T^2_{0,-1,-1})] \\
\omega_{154} &= [(2*1+1)(2*2+1)d^1_{-1,1}*d^2_{-1,1}*d^1_{0,1}*d^1_{0,1}]*\cos([0\phi_\ell + -1\phi_Z] - [0\phi_\ell + -1\phi_Z]) \\
A'_{155} &= |A_1|^2 [Re(T^1_{0,-1,-1})Re(T^2_{-1,-1,-1}) + Im(T^1_{0,-1,-1})Im(T^2_{1,-1,-1})] \\
\omega_{155} &= [(2*1+1)(2*2+1)d^1_{-1,1}*d^2_{-1,2}*d^1_{0,1}*d^1_{1,1}]*\cos([0\phi_\ell + -1\phi_Z] - [-1\phi_\ell + 0\phi_Z]) \\
A'_{156} &= |A_1|^2 [Re(T^1_{0,-1,-1})Re(T^0_{-1,-1,0}) + Im(T^1_{0,-1,-1})Im(T^0_{-1,-1,0})] \\
\omega_{156} &= [(2*1+1)(2*0+1)d^1_{-1,1}*d^0_{0,0}*d^1_{0,1}*d^1_{-1,1}]*\cos([0\phi_\ell + -1\phi_Z] - [1\phi_\ell + -1\phi_Z]) \\
A'_{157} &= |A_1|^2 [Re(T^1_{0,-1,-1})Re(T^1_{-1,-1,0}) + Im(T^1_{0,-1,-1})Im(T^1_{-1,-1,0})] \\
\omega_{157} &= [(2*1+1)(2*1+1)d^1_{-1,1}*d^1_{0,0}*d^1_{0,1}*d^1_{-1,1}]*\cos([0\phi_\ell + -1\phi_Z] - [1\phi_\ell + -1\phi_Z]) \\
A'_{158} &= |A_1|^2 [Re(T^1_{0,-1,-1})Re(T^1_{0,-1,0}) + Im(T^1_{0,-1,-1})Im(T^1_{0,-1,0})] \\
\omega_{158} &= [(2*1+1)(2*1+1)d^1_{-1,1}*d^1_{0,1}*d^1_{0,1}*d^1_{0,1}]*\cos([0\phi_\ell + -1\phi_Z] - [0\phi_\ell + 0\phi_Z]) \\
A'_{159} &= |A_1|^2 [Re(T^1_{0,-1,-1})Re(T^2_{-1,-1,0}) + Im(T^1_{0,-1,-1})Im(T^2_{-1,-1,0})] \\
\omega_{159} &= [(2*1+1)(2*2+1)d^1_{-1,1}*d^2_{0,0}*d^1_{0,1}*d^1_{-1,1}]*\cos([0\phi_\ell + -1\phi_Z] - [1\phi_\ell + -1\phi_Z]) \\
A'_{160} &= |A_1|^2 [Re(T^1_{0,-1,-1})Re(T^2_{0,-1,0}) + Im(T^1_{0,-1,-1})Im(T^2_{0,-1,0})] \\
\omega_{160} &= [(2*1+1)(2*2+1)d^1_{-1,1}*d^2_{0,1}*d^1_{0,1}*d^1_{0,1}]*\cos([0\phi_\ell + -1\phi_Z] - [0\phi_\ell + 0\phi_Z]) \\
A'_{161} &= |A_1|^2 [Re(T^1_{0,-1,-1})Re(T^2_{1,-1,0}) + Im(T^1_{0,-1,-1})Im(T^2_{1,-1,0})] \\
\omega_{161} &= [(2*1+1)(2*2+1)d^1_{-1,1}*d^2_{0,2}*d^1_{0,1}*d^1_{1,1}]*\cos([0\phi_\ell + -1\phi_Z] - [-1\phi_\ell + 1\phi_Z]) \\
A'_{162} &= |A_1|^2 [Re(T^1_{0,-1,-1})Re(T^1_{-1,-1,1}) + Im(T^1_{0,-1,-1})Im(T^1_{-1,-1,1})] \\
\omega_{162} &= [(2*1+1)(2*1+1)d^1_{-1,1}*d^1_{1,0}*d^1_{0,1}*d^1_{-1,1}]*\cos([0\phi_\ell + -1\phi_Z] - [1\phi_\ell + 0\phi_Z]) \\
A'_{163} &= |A_1|^2 [Re(T^1_{0,-1,-1})Re(T^1_{0,-1,1}) + Im(T^1_{0,-1,-1})Im(T^1_{0,-1,1})] \\
\omega_{163} &= [(2*1+1)(2*1+1)d^1_{-1,1}*d^1_{1,1}*d^1_{0,1}*d^1_{0,1}]*\cos([0\phi_\ell + -1\phi_Z] - [0\phi_\ell + 1\phi_Z]) \\
A'_{164} &= |A_1|^2 [Re(T^1_{0,-1,-1})Re(T^2_{-1,-1,1}) + Im(T^1_{0,-1,-1})Im(T^2_{-1,-1,1})] \\
\omega_{164} &= [(2*1+1)(2*2+1)d^1_{-1,1}*d^2_{1,0}*d^1_{0,1}*d^1_{-1,1}]*\cos([0\phi_\ell + -1\phi_Z] - [1\phi_\ell + 0\phi_Z]) \\
A'_{165} &= |A_1|^2 [Re(T^1_{0,-1,-1})Re(T^2_{0,-1,1}) + Im(T^1_{0,-1,-1})Im(T^2_{0,-1,1})] \\
\omega_{165} &= [(2*1+1)(2*2+1)d^1_{-1,1}*d^2_{1,1}*d^1_{0,1}*d^1_{0,1}]*\cos([0\phi_\ell + -1\phi_Z] - [0\phi_\ell + 1\phi_Z])
\end{aligned}$$

$$A'_{166} = |A_1|^2 [Re(T^1_{0,-1,-1})Re(T^2_{1,-1,1}) + Im(T^1_{0,-1,-1})Im(T^2_{1,-1,1})] \\ \omega_{166} = [(2*1+1)(2*2+1)d^1_{-1,1}*d^2_{1,2}*d^1_{0,1}*d^1_{1,1}]*\cos([0\phi_\ell - 1\phi_Z] - [-1\phi_\ell + 2\phi_Z])$$

$$A'_{167} = |A_1|^2 [Re(T^2_{-1,-1,-1})Re(T^2_{-1,-1,-1}) + Im(T^2_{-1,-1,-1})Im(T^2_{-1,-1,-1})] \\ \omega_{167} = [(2*2+1)(2*2+1)d^2_{-1,0}*d^2_{-1,0}*d^1_{-1,1}*d^1_{-1,1}]$$

$$A'_{168} = |A_1|^2 [Re(T^2_{-1,-1,-1})Re(T^2_{0,-1,-1}) + Im(T^2_{-1,-1,-1})Im(T^2_{0,-1,-1})] \\ \omega_{168} = [(2*2+1)(2*2+1)d^2_{-1,0}*d^2_{-1,1}*d^1_{-1,1}*d^1_{0,1}]*\cos([1\phi_\ell - 2\phi_Z] - [0\phi_\ell + -1\phi_Z])$$

$$A'_{169} = |A_1|^2 [Re(T^2_{-1,-1,-1})Re(T^2_{1,-1,-1}) + Im(T^2_{-1,-1,-1})Im(T^2_{1,-1,-1})] \\ \omega_{169} = [(2*2+1)(2*2+1)d^2_{-1,0}*d^2_{-1,2}*d^1_{-1,1}*d^1_{1,1}]*\cos([1\phi_\ell + -2\phi_Z] - [-1\phi_\ell + 0\phi_Z])$$

$$A'_{170} = |A_1|^2 [Re(T^2_{-1,-1,-1})Re(T^0_{-1,-1,0}) + Im(T^2_{-1,-1,-1})Im(T^0_{-1,-1,0})] \\ \omega_{170} = [(2*2+1)(2*0+1)d^2_{-1,0}*d^0_{0,0}*d^1_{-1,1}*d^1_{-1,1}]*\cos([1\phi_\ell + -2\phi_Z] - [1\phi_\ell + -1\phi_Z])$$

$$A'_{171} = |A_1|^2 [Re(T^2_{-1,-1,-1})Re(T^1_{-1,-1,0}) + Im(T^2_{-1,-1,-1})Im(T^1_{-1,-1,0})] \\ \omega_{171} = [(2*2+1)(2*1+1)d^2_{-1,0}*d^1_{0,0}*d^1_{-1,1}*d^1_{-1,1}]*\cos([1\phi_\ell + -2\phi_Z] - [1\phi_\ell + -1\phi_Z])$$

$$A'_{172} = |A_1|^2 [Re(T^2_{-1,-1,-1})Re(T^1_{0,-1,0}) + Im(T^2_{-1,-1,-1})Im(T^1_{0,-1,0})] \\ \omega_{172} = [(2*2+1)(2*1+1)d^2_{-1,0}*d^1_{0,1}*d^1_{-1,1}*d^1_{0,1}]*\cos([1\phi_\ell + -2\phi_Z] - [0\phi_\ell + 0\phi_Z])$$

$$A'_{173} = |A_1|^2 [Re(T^2_{-1,-1,-1})Re(T^2_{-1,-1,0}) + Im(T^2_{-1,-1,-1})Im(T^2_{-1,-1,0})] \\ \omega_{173} = [(2*2+1)(2*2+1)d^2_{-1,0}*d^2_{0,0}*d^1_{-1,1}*d^1_{-1,1}]*\cos([1\phi_\ell + -2\phi_Z] - [1\phi_\ell + -1\phi_Z])$$

$$A'_{174} = |A_1|^2 [Re(T^2_{-1,-1,-1})Re(T^2_{0,-1,0}) + Im(T^2_{-1,-1,-1})Im(T^2_{0,-1,0})] \\ \omega_{174} = [(2*2+1)(2*2+1)d^2_{-1,0}*d^2_{0,1}*d^1_{-1,1}*d^1_{0,1}]*\cos([1\phi_\ell + -2\phi_Z] - [0\phi_\ell + 0\phi_Z])$$

$$A'_{175} = |A_1|^2 [Re(T^2_{-1,-1,-1})Re(T^2_{1,-1,0}) + Im(T^2_{-1,-1,-1})Im(T^2_{1,-1,0})] \\ \omega_{175} = [(2*2+1)(2*2+1)d^2_{-1,0}*d^2_{0,2}*d^1_{-1,1}*d^1_{1,1}]*\cos([1\phi_\ell + -2\phi_Z] - [-1\phi_\ell + 1\phi_Z])$$

$$A'_{176} = |A_1|^2 [Re(T^2_{-1,-1,-1})Re(T^1_{-1,-1,1}) + Im(T^2_{-1,-1,-1})Im(T^1_{-1,-1,1})] \\ \omega_{176} = [(2*2+1)(2*1+1)d^2_{-1,0}*d^1_{1,0}*d^1_{-1,1}*d^1_{-1,1}]*\cos([1\phi_\ell + -2\phi_Z] - [1\phi_\ell + 0\phi_Z])$$

$$A'_{177} = |A_1|^2 [Re(T^2_{-1,-1,-1})Re(T^1_{0,-1,1}) + Im(T^2_{-1,-1,-1})Im(T^1_{0,-1,1})] \\ \omega_{177} = [(2*2+1)(2*1+1)d^2_{-1,0}*d^1_{1,1}*d^1_{-1,1}*d^1_{0,1}]*\cos([1\phi_\ell + -2\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{178} = |A_1|^2 [Re(T^2_{-1,-1,-1})Re(T^2_{-1,-1,1}) + Im(T^2_{-1,-1,-1})Im(T^2_{-1,-1,1})] \\ \omega_{178} = [(2*2+1)(2*2+1)d^2_{-1,0}*d^2_{1,0}*d^1_{-1,1}*d^1_{-1,1}]*\cos([1\phi_\ell + -2\phi_Z] - [1\phi_\ell + 0\phi_Z])$$

$$A'_{179} = |A_1|^2 [Re(T^2_{-1,-1,-1})Re(T^2_{0,-1,1}) + Im(T^2_{-1,-1,-1})Im(T^2_{0,-1,1})] \\ \omega_{179} = [(2*2+1)(2*2+1)d^2_{-1,0}*d^2_{1,1}*d^1_{-1,1}*d^1_{0,1}]*\cos([1\phi_\ell + -2\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$\begin{aligned}
A'_{180} &= |A_1|^2 [Re(T_{-1,-1,-1}^2)Re(T_{1,-1,1}^2) + Im(T_{-1,-1,-1}^2)Im(T_{1,-1,1}^2)] \\
\omega_{180} &= [(2*2+1)(2*2+1)d_{-1,0}^2 * d_{1,2}^2 * d_{-1,1}^1 * d_{1,1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [-1\phi_\ell + 2\phi_Z]) \\
A'_{181} &= |A_1|^2 [Re(T_{0,-1,-1}^2)Re(T_{0,-1,-1}^2) + Im(T_{0,-1,-1}^2)Im(T_{0,-1,-1}^2)] \\
\omega_{181} &= [2(2*2+1)(2*2+1)d_{-1,1}^2 * d_{-1,1}^2 * d_{0,1}^1 * d_{0,1}^1] \\
A'_{182} &= |A_1|^2 [Re(T_{0,-1,-1}^2)Re(T_{1,-1,-1}^2) + Im(T_{0,-1,-1}^2)Im(T_{1,-1,-1}^2)] \\
\omega_{182} &= [(2*2+1)(2*2+1)d_{-1,1}^2 * d_{-1,2}^2 * d_{0,1}^1 * d_{1,1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [-1\phi_\ell + 0\phi_Z]) \\
A'_{183} &= |A_1|^2 [Re(T_{0,-1,-1}^2)Re(T_{-1,-1,0}^0) + Im(T_{0,-1,-1}^2)Im(T_{-1,-1,0}^0)] \\
\omega_{183} &= [(2*2+1)(2*2+1)d_{-1,1}^2 * d_{0,0}^0 * d_{0,1}^1 * d_{-1,1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [1\phi_\ell + -1\phi_Z]) \\
A'_{184} &= |A_1|^2 [Re(T_{0,-1,-1}^2)Re(T_{-1,-1,0}^1) + Im(T_{0,-1,-1}^2)Im(T_{-1,-1,0}^1)] \\
\omega_{184} &= [(2*2+1)(2*2+1)d_{-1,1}^2 * d_{0,0}^1 * d_{0,1}^1 * d_{-1,1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [1\phi_\ell + -1\phi_Z]) \\
A'_{185} &= |A_1|^2 [Re(T_{0,-1,-1}^2)Re(T_{0,-1,0}^1) + Im(T_{0,-1,-1}^2)Im(T_{0,-1,0}^1)] \\
\omega_{185} &= [(2*2+1)(2*2+1)d_{-1,1}^2 * d_{0,1}^1 * d_{0,1}^1 * d_{0,1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [0\phi_\ell + 0\phi_Z]) \\
A'_{186} &= |A_1|^2 [Re(T_{0,-1,-1}^2)Re(T_{-1,-1,0}^2) + Im(T_{0,-1,-1}^2)Im(T_{-1,-1,0}^2)] \\
\omega_{186} &= [(2*2+1)(2*2+1)d_{-1,1}^2 * d_{0,0}^2 * d_{0,1}^1 * d_{-1,1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [1\phi_\ell + -1\phi_Z]) \\
A'_{187} &= |A_1|^2 [Re(T_{0,-1,-1}^2)Re(T_{0,-1,0}^2) + Im(T_{0,-1,-1}^2)Im(T_{0,-1,0}^2)] \\
\omega_{187} &= [(2*2+1)(2*2+1)d_{-1,1}^2 * d_{0,1}^2 * d_{0,1}^1 * d_{0,1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [0\phi_\ell + 0\phi_Z]) \\
A'_{188} &= |A_1|^2 [Re(T_{0,-1,-1}^2)Re(T_{1,-1,0}^2) + Im(T_{0,-1,-1}^2)Im(T_{1,-1,0}^2)] \\
\omega_{188} &= [(2*2+1)(2*2+1)d_{-1,1}^2 * d_{0,2}^2 * d_{0,1}^1 * d_{1,1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [-1\phi_\ell + 1\phi_Z]) \\
A'_{189} &= |A_1|^2 [Re(T_{0,-1,-1}^2)Re(T_{-1,-1,1}^1) + Im(T_{0,-1,-1}^2)Im(T_{-1,-1,1}^1)] \\
\omega_{189} &= [(2*2+1)(2*2+1)d_{-1,1}^2 * d_{1,0}^1 * d_{0,1}^1 * d_{-1,1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [1\phi_\ell + 0\phi_Z]) \\
A'_{190} &= |A_1|^2 [Re(T_{0,-1,-1}^2)Re(T_{0,-1,1}^1) + Im(T_{0,-1,-1}^2)Im(T_{0,-1,1}^1)] \\
\omega_{190} &= [(2*2+1)(2*2+1)d_{-1,1}^2 * d_{1,1}^1 * d_{0,1}^1 * d_{0,1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [0\phi_\ell + 1\phi_Z]) \\
A'_{191} &= |A_1|^2 [Re(T_{0,-1,-1}^2)Re(T_{-1,-1,1}^2) + Im(T_{0,-1,-1}^2)Im(T_{-1,-1,1}^2)] \\
\omega_{191} &= [(2*2+1)(2*2+1)d_{-1,1}^2 * d_{1,0}^2 * d_{0,1}^1 * d_{-1,1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [1\phi_\ell + 0\phi_Z]) \\
A'_{192} &= |A_1|^2 [Re(T_{0,-1,-1}^2)Re(T_{0,-1,1}^2) + Im(T_{0,-1,-1}^2)Im(T_{0,-1,1}^2)] \\
\omega_{192} &= [(2*2+1)(2*2+1)d_{-1,1}^2 * d_{1,1}^2 * d_{0,1}^1 * d_{0,1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [0\phi_\ell + 1\phi_Z]) \\
A'_{193} &= |A_1|^2 [Re(T_{0,-1,-1}^2)Re(T_{1,-1,1}^2) + Im(T_{0,-1,-1}^2)Im(T_{1,-1,1}^2)] \\
\omega_{193} &= [(2*2+1)(2*2+1)d_{-1,1}^2 * d_{1,2}^2 * d_{0,1}^1 * d_{1,1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [-1\phi_\ell + 2\phi_Z]) \\
A'_{194} &= |A_1|^2 [Re(T_{1,-1,-1}^2)Re(T_{1,-1,-1}^2) + Im(T_{1,-1,-1}^2)Im(T_{1,-1,-1}^2)] \\
\omega_{194} &= 2[(2*2+1)(2*2+1)d_{-1,2}^2 * d_{-1,2}^2 * d_{1,1}^1 * d_{1,1}^1]
\end{aligned}$$

$$\begin{aligned}
A'_{195} &= |A_1|^2 [Re(T_{1,-1,-1}^2)Re(T_{-1,-1,0}^0) + Im(T_{1,-1,-1}^2)Im(T_{-1,-1,0}^0)] \\
\omega_{195} &= [(2*2+1)(2*0+1)d_{-1,2}^2 * d_{0,0}^0 * d_{1,1}^1 * d_{-1,1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [1\phi_\ell + -1\phi_Z]) \\
A'_{196} &= |A_1|^2 [Re(T_{1,-1,-1}^2)Re(T_{-1,-1,0}^1) + Im(T_{1,-1,-1}^2)Im(T_{-1,-1,0}^1)] \\
\omega_{196} &= [(2*2+1)(2*1+1)d_{-1,2}^2 * d_{0,0}^1 * d_{1,1}^1 * d_{-1,1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [1\phi_\ell + -1\phi_Z]) \\
A'_{197} &= |A_1|^2 [Re(T_{1,-1,-1}^2)Re(T_{0,-1,0}^1) + Im(T_{1,-1,-1}^2)Im(T_{0,-1,0}^1)] \\
\omega_{197} &= [(2*2+1)(2*1+1)d_{-1,2}^2 * d_{0,1}^1 * d_{1,1}^1 * d_{0,1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [0\phi_\ell + 0\phi_Z]) \\
A'_{198} &= |A_1|^2 [Re(T_{1,-1,-1}^2)Re(T_{-1,-1,0}^2) + Im(T_{1,-1,-1}^2)Im(T_{-1,-1,0}^2)] \\
\omega_{198} &= [(2*2+1)(2*2+1)d_{-1,2}^2 * d_{0,0}^2 * d_{1,1}^1 * d_{-1,1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [1\phi_\ell + -1\phi_Z]) \\
A'_{199} &= |A_1|^2 [Re(T_{1,-1,-1}^2)Re(T_{0,-1,0}^2) + Im(T_{1,-1,-1}^2)Im(T_{0,-1,0}^2)] \\
\omega_{199} &= [(2*2+1)(2*2+1)d_{-1,2}^2 * d_{0,1}^2 * d_{1,1}^1 * d_{0,1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [0\phi_\ell + 0\phi_Z]) \\
A'_{200} &= |A_1|^2 [Re(T_{1,-1,-1}^2)Re(T_{1,-1,0}^2) + Im(T_{1,-1,-1}^2)Im(T_{1,-1,0}^2)] \\
\omega_{200} &= [(2*2+1)(2*2+1)d_{-1,2}^2 * d_{0,2}^2 * d_{1,1}^1 * d_{1,1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 1\phi_Z]) \\
A'_{201} &= |A_1|^2 [Re(T_{1,-1,-1}^2)Re(T_{-1,-1,1}^1) + Im(T_{1,-1,-1}^2)Im(T_{-1,-1,1}^1)] \\
\omega_{201} &= [(2*2+1)(2*1+1)d_{-1,2}^2 * d_{1,0}^1 * d_{1,1}^1 * d_{-1,1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [1\phi_\ell + 0\phi_Z]) \\
A'_{202} &= |A_1|^2 [Re(T_{1,-1,-1}^2)Re(T_{0,-1,1}^1) + Im(T_{1,-1,-1}^2)Im(T_{0,-1,1}^1)] \\
\omega_{202} &= [(2*2+1)(2*1+1)d_{-1,2}^2 * d_{1,1}^1 * d_{1,1}^1 * d_{0,1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [0\phi_\ell + 1\phi_Z]) \\
A'_{203} &= |A_1|^2 [Re(T_{1,-1,-1}^2)Re(T_{-1,-1,1}^2) + Im(T_{1,-1,-1}^2)Im(T_{-1,-1,1}^2)] \\
\omega_{203} &= [(2*2+1)(2*2+1)d_{-1,2}^2 * d_{1,0}^2 * d_{1,1}^1 * d_{-1,1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [1\phi_\ell + 0\phi_Z]) \\
A'_{204} &= |A_1|^2 [Re(T_{1,-1,-1}^2)Re(T_{0,-1,1}^2) + Im(T_{1,-1,-1}^2)Im(T_{0,-1,1}^2)] \\
\omega_{204} &= [(2*2+1)(2*2+1)d_{-1,2}^2 * d_{1,1}^2 * d_{1,1}^1 * d_{0,1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [0\phi_\ell + 1\phi_Z]) \\
A'_{205} &= |A_1|^2 [Re(T_{1,-1,-1}^2)Re(T_{1,-1,1}^2) + Im(T_{1,-1,-1}^2)Im(T_{1,-1,1}^2)] \\
\omega_{205} &= [(2*2+1)(2*2+1)d_{-1,2}^2 * d_{1,2}^2 * d_{1,1}^1 * d_{1,1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 2\phi_Z]) \\
A'_{206} &= |A_1|^2 [Re(T_{-1,-1,0}^0)Re(T_{-1,-1,0}^0) + Im(T_{-1,-1,0}^0)Im(T_{-1,-1,0}^0)] \\
\omega_{206} &= 2[(2*0+1)(2*0+1)d_{0,0}^0 * d_{0,0}^0 * d_{-1,1}^1 * d_{-1,1}^1] \\
A'_{207} &= |A_1|^2 [Re(T_{-1,-1,0}^0)Re(T_{-1,-1,0}^1) + Im(T_{-1,-1,0}^0)Im(T_{-1,-1,0}^1)] \\
\omega_{207} &= [(2*0+1)(2*1+1)d_{0,0}^0 * d_{0,0}^1 * d_{-1,1}^1 * d_{-1,1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [1\phi_\ell + -1\phi_Z]) \\
A'_{208} &= |A_1|^2 [Re(T_{-1,-1,0}^0)Re(T_{0,-1,0}^1) + Im(T_{-1,-1,0}^0)Im(T_{0,-1,0}^1)] \\
\omega_{208} &= [(2*0+1)(2*1+1)d_{0,0}^0 * d_{0,1}^1 * d_{-1,1}^1 * d_{0,1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [0\phi_\ell + 0\phi_Z]) \\
A'_{209} &= |A_1|^2 [Re(T_{-1,-1,0}^0)Re(T_{-1,-1,0}^2) + Im(T_{-1,-1,0}^0)Im(T_{-1,-1,0}^2)] \\
\omega_{209} &= [(2*0+1)(2*2+1)d_{0,0}^0 * d_{0,0}^2 * d_{-1,1}^1 * d_{-1,1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [1\phi_\ell + -1\phi_Z]) \\
A'_{210} &= |A_1|^2 [Re(T_{-1,-1,0}^0)Re(T_{0,-1,0}^2) + Im(T_{-1,-1,0}^0)Im(T_{0,-1,0}^2)]
\end{aligned}$$

$$\omega_{210} = [(2*0+1)(2*2+1)d_{0,0}^0 * d_{0,1}^2 * d_{-1,1}^1 * d_{0,1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [0\phi_\ell + 0\phi_Z])$$

$$A'_{211} = |A_1|^2 [Re(T_{-1,-1,0}^0)Re(T_{1,-1,0}^2) + Im(T_{-1,-1,0}^0)Im(T_{1,-1,0}^2)] \\ \omega_{211} = [(2*0+1)(2*2+1)d_{0,0}^0 * d_{0,2}^2 * d_{-1,1}^1 * d_{1,1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [-1\phi_\ell + 1\phi_Z])$$

$$A'_{212} = |A_1|^2 [Re(T_{-1,-1,0}^0)Re(T_{-1,-1,1}^1) + Im(T_{-1,-1,0}^0)Im(T_{-1,-1,1}^1)] \\ \omega_{212} = [(2*0+1)(2*1+1)d_{0,0}^0 * d_{1,0}^1 * d_{-1,1}^1 * d_{-1,1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [1\phi_\ell + 0\phi_Z])$$

$$A'_{213} = |A_1|^2 [Re(T_{-1,-1,0}^0)Re(T_{0,-1,1}^1) + Im(T_{-1,-1,0}^0)Im(T_{0,-1,1}^1)] \\ \omega_{213} = [(2*0+1)(2*1+1)d_{0,0}^0 * d_{1,1}^1 * d_{-1,1}^1 * d_{0,1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{214} = |A_1|^2 [Re(T_{-1,-1,0}^0)Re(T_{-1,-1,1}^2) + Im(T_{-1,-1,0}^0)Im(T_{-1,-1,1}^2)] \\ \omega_{214} = [(2*0+1)(2*2+1)d_{0,0}^0 * d_{2,0}^2 * d_{-1,1}^1 * d_{-1,1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [1\phi_\ell + 0\phi_Z])$$

$$A'_{215} = |A_1|^2 [Re(T_{-1,-1,0}^0)Re(T_{0,-1,1}^2) + Im(T_{-1,-1,0}^0)Im(T_{0,-1,1}^2)] \\ \omega_{215} = [(2*0+1)(2*2+1)d_{0,0}^0 * d_{1,1}^2 * d_{-1,1}^1 * d_{0,1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{216} = |A_1|^2 [Re(T_{-1,-1,0}^0)Re(T_{1,-1,1}^2) + Im(T_{-1,-1,0}^0)Im(T_{1,-1,1}^2)] \\ \omega_{216} = [(2*0+1)(2*2+1)d_{0,0}^0 * d_{1,2}^2 * d_{-1,1}^1 * d_{1,1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [-1\phi_\ell + 2\phi_Z])$$

$$A'_{217} = |A_1|^2 [Re(T_{-1,-1,0}^1)Re(T_{-1,-1,0}^1) + Im(T_{-1,-1,0}^1)Im(T_{-1,-1,0}^1)] \\ \omega_{217} = 2[(2*1+1)(2*1+1)d_{0,0}^1 * d_{0,0}^1 * d_{-1,1}^1 * d_{-1,1}^1]$$

$$A'_{218} = |A_1|^2 [Re(T_{-1,-1,0}^1)Re(T_{0,-1,0}^1) + Im(T_{-1,-1,0}^1)Im(T_{0,-1,0}^1)] \\ \omega_{218} = [(2*1+1)(2*1+1)d_{0,0}^1 * d_{0,1}^1 * d_{-1,1}^1 * d_{0,1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [0\phi_\ell + 0\phi_Z])$$

$$A'_{219} = |A_1|^2 [Re(T_{-1,-1,0}^1)Re(T_{-1,-1,0}^2) + Im(T_{-1,-1,0}^1)Im(T_{-1,-1,0}^2)] \\ \omega_{219} = [(2*1+1)(2*2+1)d_{0,0}^1 * d_{0,0}^2 * d_{-1,1}^1 * d_{-1,1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [1\phi_\ell + -1\phi_Z])$$

$$A'_{220} = |A_1|^2 [Re(T_{-1,-1,0}^1)Re(T_{0,-1,0}^2) + Im(T_{-1,-1,0}^1)Im(T_{0,-1,0}^2)] \\ \omega_{220} = [(2*1+1)(2*2+1)d_{0,0}^1 * d_{0,1}^2 * d_{-1,1}^1 * d_{0,1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [0\phi_\ell + 0\phi_Z])$$

$$A'_{221} = |A_1|^2 [Re(T_{-1,-1,0}^1)Re(T_{1,-1,0}^2) + Im(T_{-1,-1,0}^1)Im(T_{1,-1,0}^2)] \\ \omega_{221} = [(2*1+1)(2*2+1)d_{0,0}^1 * d_{0,2}^2 * d_{-1,1}^1 * d_{1,1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [-1\phi_\ell + 1\phi_Z])$$

$$A'_{222} = |A_1|^2 [Re(T_{-1,-1,0}^1)Re(T_{-1,-1,1}^1) + Im(T_{-1,-1,0}^1)Im(T_{-1,-1,1}^1)] \\ \omega_{222} = [(2*1+1)(2*1+1)d_{0,0}^1 * d_{1,0}^1 * d_{-1,1}^1 * d_{-1,1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [1\phi_\ell + 0\phi_Z])$$

$$A'_{223} = |A_1|^2 [Re(T_{-1,-1,0}^1)Re(T_{0,-1,1}^1) + Im(T_{-1,-1,0}^1)Im(T_{0,-1,1}^1)] \\ \omega_{223} = [(2*1+1)(2*1+1)d_{0,0}^1 * d_{1,1}^1 * d_{-1,1}^1 * d_{0,1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{224} = |A_1|^2 [Re(T_{-1,-1,0}^1)Re(T_{-1,-1,1}^2) + Im(T_{-1,-1,0}^1)Im(T_{-1,-1,1}^2)] \\ \omega_{224} = [(2*1+1)(2*2+1)d_{0,0}^1 * d_{1,0}^2 * d_{-1,1}^1 * d_{-1,1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [1\phi_\ell + 0\phi_Z])$$

$$A'_{225} = |A_1|^2 [Re(T_{-1,-1,0}^1)Re(T_{0,-1,1}^2) + Im(T_{-1,-1,0}^1)Im(T_{0,-1,1}^2)] \\ \omega_{225} = [(2*1+1)(2*2+1)d_{0,0}^1 * d_{1,1}^2 * d_{-1,1}^1 * d_{0,1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{226} = |A_1|^2 [Re(T^1_{-1,-1,0})Re(T^2_{1,-1,1}) + Im(T^1_{-1,-1,0})Im(T^2_{1,-1,1})] \\ \omega_{226} = [(2*1+1)(2*2+1)d^1_{0,0}*d^2_{1,2}*d^1_{-1,1}*d^1_{1,1}]*\cos([1\phi_\ell + -1\phi_Z] - [-1\phi_\ell + 2\phi_Z])$$

$$A'_{227} = |A_1|^2 [Re(T^1_{0,-1,0})Re(T^1_{0,-1,0}) + Im(T^1_{0,-1,0})Im(T^1_{0,-1,0})] \\ \omega_{227} = [(2*1+1)(2*1+1)d^1_{0,1}*d^1_{0,1}*d^1_{0,1}*d^1_{0,1}]$$

$$A'_{228} = |A_1|^2 [Re(T^1_{0,-1,0})Re(T^2_{-1,-1,0}) + Im(T^1_{0,-1,0})Im(T^2_{-1,-1,0})] \\ \omega_{228} = [(2*1+1)(2*2+1)d^1_{0,1}*d^2_{0,0}*d^1_{0,1}*d^1_{-1,1}]*\cos([0\phi_\ell + 0\phi_Z] - [1\phi_\ell + -1\phi_Z])$$

$$A'_{229} = |A_1|^2 [Re(T^1_{0,-1,0})Re(T^2_{0,-1,0}) + Im(T^1_{0,-1,0})Im(T^2_{0,-1,0})] \\ \omega_{229} = [(2*1+1)(2*2+1)d^1_{0,1}*d^2_{0,1}*d^1_{0,1}*d^1_{0,1}]*\cos([0\phi_\ell + 0\phi_Z] - [0\phi_\ell + 0\phi_Z])$$

$$A'_{230} = |A_1|^2 [Re(T^1_{0,-1,0})Re(T^2_{1,-1,0}) + Im(T^1_{0,-1,0})Im(T^2_{1,-1,0})] \\ \omega_{230} = [(2*1+1)(2*2+1)d^1_{0,1}*d^2_{0,2}*d^1_{0,1}*d^1_{1,1}]*\cos([0\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 1\phi_Z])$$

$$A'_{231} = |A_1|^2 [Re(T^1_{0,-1,0})Re(T^1_{-1,-1,1}) + Im(T^1_{0,-1,0})Im(T^1_{-1,-1,1})] \\ \omega_{231} = [(2*1+1)(2*1+1)d^1_{0,1}*d^1_{1,0}*d^1_{0,1}*d^1_{-1,1}]*\cos([0\phi_\ell + 0\phi_Z] - [1\phi_\ell + 0\phi_Z])$$

$$A'_{232} = |A_1|^2 [Re(T^1_{0,-1,0})Re(T^1_{0,-1,1}) + Im(T^1_{0,-1,0})Im(T^1_{0,-1,1})] \\ \omega_{232} = [(2*1+1)(2*1+1)d^1_{0,1}*d^1_{1,1}*d^1_{0,1}*d^1_{0,1}]*\cos([0\phi_\ell + 0\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{233} = |A_1|^2 [Re(T^1_{0,-1,0})Re(T^2_{-1,-1,1}) + Im(T^1_{0,-1,0})Im(T^2_{-1,-1,1})] \\ \omega_{233} = [(2*1+1)(2*2+1)d^1_{0,1}*d^2_{1,0}*d^1_{0,1}*d^1_{-1,1}]*\cos([0\phi_\ell + 0\phi_Z] - [1\phi_\ell + 0\phi_Z])$$

$$A'_{234} = |A_1|^2 [Re(T^1_{0,-1,0})Re(T^2_{0,-1,1}) + Im(T^1_{0,-1,0})Im(T^2_{0,-1,1})] \\ \omega_{234} = [(2*1+1)(2*2+1)d^1_{0,1}*d^2_{1,1}*d^1_{0,1}*d^1_{0,1}]*\cos([0\phi_\ell + 0\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{235} = |A_1|^2 [Re(T^1_{0,-1,0})Re(T^2_{1,-1,1}) + Im(T^1_{0,-1,0})Im(T^2_{1,-1,1})] \\ \omega_{235} = [(2*1+1)(2*2+1)d^1_{0,1}*d^2_{1,2}*d^1_{0,1}*d^1_{1,1}]*\cos([0\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 2\phi_Z])$$

$$A'_{236} = |A_1|^2 [Re(T^2_{-1,-1,0})Re(T^2_{-1,-1,0}) + Im(T^2_{-1,-1,0})Im(T^2_{-1,-1,0})] \\ \omega_{236} = [(2*2+1)(2*2+1)d^2_{0,0}*d^2_{0,0}*d^1_{-1,1}*d^1_{-1,1}]$$

$$A'_{237} = |A_1|^2 [Re(T^2_{-1,-1,0})Re(T^2_{0,-1,0}) + Im(T^2_{-1,-1,0})Im(T^2_{0,-1,0})] \\ \omega_{237} = [(2*2+1)(2*2+1)d^2_{0,0}*d^2_{0,1}*d^1_{-1,1}*d^1_{0,1}]*\cos([1\phi_\ell + -1\phi_Z] - [0\phi_\ell + 0\phi_Z])$$

$$A'_{238} = |A_1|^2 [Re(T^2_{-1,-1,0})Re(T^2_{1,-1,0}) + Im(T^2_{-1,-1,0})Im(T^2_{1,-1,0})] \\ \omega_{238} = [(2*2+1)(2*2+1)d^2_{0,0}*d^2_{0,2}*d^1_{-1,1}*d^1_{1,1}]*\cos([1\phi_\ell + -1\phi_Z] - [-1\phi_\ell + 1\phi_Z])$$

$$A'_{239} = |A_1|^2 [Re(T^2_{-1,-1,0})Re(T^1_{-1,-1,1}) + Im(T^2_{-1,-1,0})Im(T^1_{-1,-1,1})] \\ \omega_{239} = [(2*2+1)(2*1+1)d^2_{0,0}*d^1_{1,0}*d^1_{-1,1}*d^1_{-1,1}]*\cos([1\phi_\ell + -1\phi_Z] - [1\phi_\ell + 0\phi_Z])$$

$$A'_{240} = |A_1|^2 [Re(T^2_{-1,-1,0})Re(T^1_{0,-1,1}) + Im(T^2_{-1,-1,0})Im(T^1_{0,-1,1})] \\ \omega_{240} = [(2*2+1)(2*1+1)d^2_{0,0}*d^1_{1,1}*d^1_{-1,1}*d^1_{0,1}]*\cos([1\phi_\ell + -1\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{241} = |A_1|^2 [Re(T_{-1,-1,0}^2)Re(T_{-1,-1,1}^2) + Im(T_{-1,-1,0}^2)Im(T_{-1,-1,1}^2)] \\ \omega_{241} = [(2*2+1)(2*2+1)d_{0,0}^2 * d_{1,0}^2 * d_{-1,1}^1 * d_{-1,1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [1\phi_\ell + 0\phi_Z])$$

$$A'_{242} = |A_1|^2 [Re(T_{-1,-1,0}^2)Re(T_{0,-1,1}^2) + Im(T_{-1,-1,0}^2)Im(T_{0,-1,1}^2)] \\ \omega_{242} = [(2*2+1)(2*2+1)d_{0,0}^2 * d_{1,1}^2 * d_{-1,1}^1 * d_{0,1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{243} = |A_1|^2 [Re(T_{-1,-1,0}^2)Re(T_{1,-1,1}^2) + Im(T_{-1,-1,0}^2)Im(T_{1,-1,1}^2)] \\ \omega_{243} = [(2*2+1)(2*2+1)d_{0,0}^2 * d_{1,2}^2 * d_{-1,1}^1 * d_{1,1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [-1\phi_\ell + 2\phi_Z])$$

$$A'_{244} = |A_1|^2 [Re(T_{0,-1,0}^2)Re(T_{0,-1,0}^2) + Im(T_{0,-1,0}^2)Im(T_{0,-1,0}^2)] \\ \omega_{244} = [(2*2+1)(2*2+1)d_{0,1}^2 * d_{0,1}^2 * d_{0,1}^1 * d_{0,1}^1]$$

$$A'_{245} = |A_1|^2 [Re(T_{0,-1,0}^2)Re(T_{1,-1,0}^2) + Im(T_{0,-1,0}^2)Im(T_{1,-1,0}^2)] \\ \omega_{245} = [(2*2+1)(2*2+1)d_{0,1}^2 * d_{0,2}^2 * d_{0,1}^1 * d_{1,1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 1\phi_Z])$$

$$A'_{246} = |A_1|^2 [Re(T_{0,-1,0}^2)Re(T_{-1,-1,1}^1) + Im(T_{0,-1,0}^2)Im(T_{-1,-1,1}^1)] \\ \omega_{246} = [(2*2+1)(2*1+1)d_{0,1}^2 * d_{1,0}^1 * d_{0,1}^1 * d_{-1,1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [1\phi_\ell + 0\phi_Z])$$

$$A'_{247} = |A_1|^2 [Re(T_{0,-1,0}^2)Re(T_{0,-1,1}^1) + Im(T_{0,-1,0}^2)Im(T_{0,-1,1}^1)] \\ \omega_{247} = [(2*2+1)(2*1+1)d_{0,1}^2 * d_{1,1}^1 * d_{0,1}^1 * d_{0,1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{248} = |A_1|^2 [Re(T_{0,-1,0}^2)Re(T_{-1,-1,1}^2) + Im(T_{0,-1,0}^2)Im(T_{-1,-1,1}^2)] \\ \omega_{248} = [(2*2+1)(2*2+1)d_{0,1}^2 * d_{1,0}^2 * d_{0,1}^1 * d_{-1,1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [1\phi_\ell + 0\phi_Z])$$

$$A'_{249} = |A_1|^2 [Re(T_{0,-1,0}^2)Re(T_{0,-1,1}^2) + Im(T_{0,-1,0}^2)Im(T_{0,-1,1}^2)] \\ \omega_{249} = [(2*2+1)(2*2+1)d_{0,1}^2 * d_{1,1}^2 * d_{0,1}^1 * d_{0,1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{250} = |A_1|^2 [Re(T_{0,-1,0}^2)Re(T_{1,-1,1}^2) + Im(T_{0,-1,0}^2)Im(T_{1,-1,1}^2)] \\ \omega_{250} = [(2*2+1)(2*2+1)d_{0,1}^2 * d_{1,2}^2 * d_{0,1}^1 * d_{1,1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 2\phi_Z])$$

$$A'_{251} = |A_1|^2 [Re(T_{1,-1,0}^2)Re(T_{1,-1,0}^2) + Im(T_{1,-1,0}^2)Im(T_{1,-1,0}^2)] \\ \omega_{251} = [(2*2+1)(2*2+1)d_{0,2}^2 * d_{0,2}^2 * d_{1,1}^1 * d_{1,1}^1]$$

$$A'_{252} = |A_1|^2 [Re(T_{1,-1,0}^2)Re(T_{-1,-1,1}^1) + Im(T_{1,-1,0}^2)Im(T_{-1,-1,1}^1)] \\ \omega_{252} = [(2*2+1)(2*1+1)d_{0,2}^2 * d_{1,0}^1 * d_{1,1}^1 * d_{-1,1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [1\phi_\ell + 0\phi_Z])$$

$$A'_{253} = |A_1|^2 [Re(T_{1,-1,0}^2)Re(T_{0,-1,1}^1) + Im(T_{1,-1,0}^2)Im(T_{0,-1,1}^1)] \\ \omega_{253} = [(2*2+1)(2*1+1)d_{0,2}^2 * d_{1,1}^1 * d_{1,1}^1 * d_{0,1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{254} = |A_1|^2 [Re(T_{1,-1,0}^2)Re(T_{-1,-1,1}^2) + Im(T_{1,-1,0}^2)Im(T_{-1,-1,1}^2)] \\ \omega_{254} = [(2*2+1)(2*2+1)d_{0,2}^2 * d_{1,0}^2 * d_{1,1}^1 * d_{-1,1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [1\phi_\ell + 0\phi_Z])$$

$$A'_{255} = |A_1|^2 [Re(T_{1,-1,0}^2)Re(T_{0,-1,1}^2) + Im(T_{1,-1,0}^2)Im(T_{0,-1,1}^2)] \\ \omega_{255} = [(2*2+1)(2*2+1)d_{0,2}^2 * d_{1,1}^2 * d_{1,1}^1 * d_{0,1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{256} = |A_1|^2 [Re(T_{1,-1,0}^2)Re(T_{1,-1,1}^2) + Im(T_{1,-1,0}^2)Im(T_{1,-1,1}^2)]$$

$$\omega_{256} = [(2*2+1)(2*2+1)d_{0,2}^2 * d_{1,2}^2 * d_{1,1}^1 * d_{1,1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [-1\phi_\ell + 2\phi_Z])$$

$$A'_{257} = |A_1|^2 [Re(T_{-1,-1,1}^1)Re(T_{-1,-1,1}^1) + Im(T_{-1,-1,1}^1)Im(T_{-1,-1,1}^1)] \\ \omega_{257} = 2[(2*1+1)(2*1+1)d_{1,0}^1 * d_{1,0}^1 * d_{-1,1}^1 * d_{-1,1}^1]$$

$$A'_{258} = |A_1|^2 [Re(T_{-1,-1,1}^1)Re(T_{0,-1,1}^1) + Im(T_{-1,-1,1}^1)Im(T_{0,-1,1}^1)] \\ \omega_{258} = [(2*1+1)(2*1+1)d_{1,0}^1 * d_{1,1}^1 * d_{-1,1}^1 * d_{0,1}^1] * \cos([1\phi_\ell + 0\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{259} = |A_1|^2 [Re(T_{-1,-1,1}^1)Re(T_{-2,-1,1}^2) + Im(T_{-1,-1,1}^1)Im(T_{-2,-1,1}^2)] \\ \omega_{259} = [(2*1+1)(2*2+1)d_{1,0}^1 * d_{1,1}^2 * d_{-1,1}^1 * d_{0,1}^1] * \cos([1\phi_\ell + 0\phi_Z] - [1\phi_\ell + 0\phi_Z])$$

$$A'_{260} = |A_1|^2 [Re(T_{-1,-1,1}^1)Re(T_{0,-1,1}^2) + Im(T_{-1,-1,1}^1)Im(T_{0,-1,1}^2)] \\ \omega_{260} = [(2*1+1)(2*2+1)d_{1,0}^1 * d_{1,1}^2 * d_{-1,1}^1 * d_{0,1}^1] * \cos([1\phi_\ell + 0\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{261} = |A_1|^2 [Re(T_{-1,-1,1}^1)Re(T_{1,-1,1}^2) + Im(T_{-1,-1,1}^1)Im(T_{1,-1,1}^2)] \\ \omega_{261} = [(2*1+1)(2*2+1)d_{1,0}^1 * d_{1,2}^2 * d_{-1,1}^1 * d_{1,1}^1] * \cos([1\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 2\phi_Z])$$

$$A'_{262} = |A_1|^2 [Re(T_{0,-1,1}^1)Re(T_{0,-1,1}^1) + Im(T_{0,-1,1}^1)Im(T_{0,-1,1}^1)] \\ \omega_{262} = 2[(2*1+1)(2*1+1)d_{1,1}^1 * d_{1,1}^1 * d_{0,1}^1 * d_{0,1}^1]$$

$$A'_{263} = |A_1|^2 [Re(T_{0,-1,1}^1)Re(T_{-1,-1,1}^2) + Im(T_{0,-1,1}^1)Im(T_{-1,-1,1}^2)] \\ \omega_{263} = [(2*1+1)(2*2+1)d_{1,1}^1 * d_{1,0}^2 * d_{0,1}^1 * d_{-1,1}^1] * \cos([0\phi_\ell + 1\phi_Z] - [1\phi_\ell + 0\phi_Z])$$

$$A'_{264} = |A_1|^2 [Re(T_{0,-1,1}^1)Re(T_{0,-1,1}^2) + Im(T_{0,-1,1}^1)Im(T_{0,-1,1}^2)] \\ \omega_{264} = [(2*1+1)(2*2+1)d_{1,1}^1 * d_{1,1}^2 * d_{0,1}^1 * d_{0,1}^1] * \cos([0\phi_\ell + 1\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{265} = |A_1|^2 [Re(T_{0,-1,1}^1)Re(T_{1,-1,1}^2) + Im(T_{0,-1,1}^1)Im(T_{1,-1,1}^2)] \\ \omega_{265} = [(2*1+1)(2*2+1)d_{1,1}^1 * d_{1,2}^2 * d_{0,1}^1 * d_{1,1}^1] * \cos([0\phi_\ell + 1\phi_Z] - [-1\phi_\ell + 2\phi_Z])$$

$$A'_{266} = |A_1|^2 [Re(T_{-1,-1,1}^2)Re(T_{-2,-1,1}^2) + Im(T_{-1,-1,1}^2)Im(T_{-2,-1,1}^2)] \\ \omega_{266} = 2[(2*2+1)(2*2+1)d_{1,0}^2 * d_{1,0}^2 * d_{-1,1}^1 * d_{-1,1}^1]$$

$$A'_{267} = |A_1|^2 [Re(T_{-1,-1,1}^2)Re(T_{0,-1,1}^2) + Im(T_{-1,-1,1}^2)Im(T_{0,-1,1}^2)] \\ \omega_{267} = [(2*2+1)(2*2+1)d_{1,0}^2 * d_{1,1}^2 * d_{-1,1}^1 * d_{0,1}^1] * \cos([1\phi_\ell + 0\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{268} = |A_1|^2 [Re(T_{-1,-1,1}^2)Re(T_{1,-1,1}^2) + Im(T_{-1,-1,1}^2)Im(T_{1,-1,1}^2)] \\ \omega_{268} = [(2*2+1)(2*2+1)d_{1,0}^2 * d_{1,2}^2 * d_{-1,1}^1 * d_{1,1}^1] * \cos([1\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 2\phi_Z])$$

$$A'_{269} = |A_1|^2 [Re(T_{0,-1,1}^2)Re(T_{0,-1,1}^2) + Im(T_{0,-1,1}^2)Im(T_{0,-1,1}^2)] \\ \omega_{269} = 2[(2*2+1)(2*2+1)d_{1,1}^2 * d_{1,1}^2 * d_{0,1}^1 * d_{0,1}^1]$$

$$A'_{270} = |A_1|^2 [Re(T_{0,-1,1}^2)Re(T_{1,-1,1}^2) + Im(T_{0,-1,1}^2)Im(T_{1,-1,1}^2)] \\ \omega_{270} = [(2*2+1)(2*2+1)d_{1,1}^2 * d_{1,2}^2 * d_{0,1}^1 * d_{1,1}^1] * \cos([0\phi_\ell + 1\phi_Z] - [-1\phi_\ell + 2\phi_Z])$$

$$A'_{271} = |A_1|^2 [Re(T_{1,-1,1}^2)Re(T_{1,-1,1}^2) + Im(T_{1,-1,1}^2)Im(T_{1,-1,1}^2)] \\ \omega_{271} = 2[(2*2+1)(2*2+1)d_{1,2}^2 * d_{1,2}^2 * d_{1,1}^1 * d_{1,1}^1]$$

$$\begin{aligned}
A'_{272} &= |A_{-1}|^2 [Re(T_{0,1,-1}^1)Re(T_{0,1,-1}^1) + Im(T_{0,1,-1}^1)Im(T_{0,1,-1}^1)] \\
\omega_{272} &= [(2*1+1)(2*1+1)d_{-1,-1}^1 * d_{-1,-1}^1 * d_{0,-1}^1 * d_{0,-1}^1] \\
A'_{273} &= |A_{-1}|^2 [Re(T_{0,1,-1}^1)Re(T_{1,1,-1}^1) + Im(T_{0,1,-1}^1)Im(T_{1,1,-1}^1)] \\
\omega_{273} &= [(2*1+1)(2*1+1)d_{-1,-1}^1 * d_{-1,0}^1 * d_{0,-1}^1 * d_{1,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - \\
&\quad [-1\phi_\ell + 0\phi_Z]) \\
A'_{274} &= |A_{-1}|^2 [Re(T_{0,1,-1}^1)Re(T_{-1,1,-1}^2) + Im(T_{0,1,-1}^1)Im(T_{-1,1,-1}^2)] \\
\omega_{274} &= [(2*1+1)(2*2+1)d_{-1,-1}^1 * d_{-1,-2}^2 * d_{0,-1}^1 * d_{1,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - \\
&\quad [1\phi_\ell + -2\phi_Z]) \\
A'_{275} &= |A_{-1}|^2 [Re(T_{0,1,-1}^1)Re(T_{0,1,-1}^2) + Im(T_{0,1,-1}^1)Im(T_{0,1,-1}^2)] \\
\omega_{275} &= [(2*1+1)(2*2+1)d_{-1,-1}^1 * d_{-1,-1}^2 * d_{0,-1}^1 * d_{0,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - \\
&\quad [0\phi_\ell + -1\phi_Z]) \\
A'_{276} &= |A_{-1}|^2 [Re(T_{0,1,-1}^1)Re(T_{1,1,-1}^2) + Im(T_{0,1,-1}^1)Im(T_{1,1,-1}^2)] \\
\omega_{276} &= [(2*1+1)(2*2+1)d_{-1,-1}^1 * d_{-1,0}^2 * d_{0,-1}^1 * d_{1,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - \\
&\quad [-1\phi_\ell + 0\phi_Z]) \\
A'_{277} &= |A_{-1}|^2 [Re(T_{0,1,-1}^1)Re(T_{1,1,0}^0) + Im(T_{0,1,-1}^1)Im(T_{1,1,0}^0)] \\
\omega_{277} &= [(2*1+1)(2*0+1)d_{-1,-1}^1 * d_{0,0}^0 * d_{0,-1}^1 * d_{1,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - \\
&\quad [-1\phi_\ell + 1\phi_Z]) \\
A'_{278} &= |A_{-1}|^2 [Re(T_{0,1,-1}^1)Re(T_{0,1,0}^1) + Im(T_{0,1,-1}^1)Im(T_{0,1,0}^1)] \\
\omega_{278} &= [(2*1+1)(2*1+1)d_{-1,-1}^1 * d_{0,-1}^1 * d_{0,-1}^1 * d_{0,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - \\
&\quad [0\phi_\ell + 0\phi_Z]) \\
A'_{279} &= |A_{-1}|^2 [Re(T_{0,1,-1}^1)Re(T_{1,1,0}^1) + Im(T_{0,1,-1}^1)Im(T_{1,1,0}^1)] \\
\omega_{279} &= [(2*1+1)(2*1+1)d_{-1,-1}^1 * d_{0,0}^1 * d_{0,-1}^1 * d_{1,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - \\
&\quad [-1\phi_\ell + 1\phi_Z]) \\
A'_{280} &= |A_{-1}|^2 [Re(T_{0,1,-1}^1)Re(T_{-1,1,0}^2) + Im(T_{0,1,-1}^1)Im(T_{-1,1,0}^2)] \\
\omega_{280} &= [(2*1+1)(2*2+1)d_{-1,-1}^1 * d_{0,-2}^2 * d_{0,-1}^1 * d_{1,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - \\
&\quad [1\phi_\ell + -1\phi_Z]) \\
A'_{281} &= |A_{-1}|^2 [Re(T_{0,1,-1}^1)Re(T_{0,1,0}^2) + Im(T_{0,1,-1}^1)Im(T_{0,1,0}^2)] \\
\omega_{281} &= [(2*1+1)(2*2+1)d_{-1,-1}^1 * d_{0,-1}^2 * d_{0,-1}^1 * d_{0,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - \\
&\quad [0\phi_\ell + 0\phi_Z]) \\
A'_{282} &= |A_{-1}|^2 [Re(T_{0,1,-1}^1)Re(T_{1,1,0}^2) + Im(T_{0,1,-1}^1)Im(T_{1,1,0}^2)] \\
\omega_{282} &= [(2*1+1)(2*2+1)d_{-1,-1}^1 * d_{0,0}^2 * d_{0,-1}^1 * d_{1,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - \\
&\quad [-1\phi_\ell + 1\phi_Z]) \\
A'_{283} &= |A_{-1}|^2 [Re(T_{0,1,-1}^1)Re(T_{0,1,1}^1) + Im(T_{0,1,-1}^1)Im(T_{0,1,1}^1)] \\
\omega_{283} &= [(2*1+1)(2*1+1)d_{-1,-1}^1 * d_{1,-1}^1 * d_{0,-1}^1 * d_{0,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - \\
&\quad [-1\phi_\ell + 1\phi_Z])
\end{aligned}$$

$$[0\phi_\ell + 1\phi_Z])$$

$$\begin{aligned} A'_{284} &= |A_{-1}|^2 [Re(T_{0,1,-1}^1)Re(T_{1,1,1}^1) + Im(T_{0,1,-1}^1)Im(T_{1,1,1}^1)] \\ \omega_{284} &= [(2*1+1)(2*1+1)d_{-1,-1}^1 * d_{1,0}^1 * d_{0,-1}^1 * d_{1,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [-1\phi_\ell + 2\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{285} &= |A_{-1}|^2 [Re(T_{0,1,-1}^1)Re(T_{-1,1,1}^2) + Im(T_{0,1,-1}^1)Im(T_{-1,1,1}^2)] \\ \omega_{285} &= [(2*1+1)(2*2+1)d_{-1,-1}^1 * d_{1,-2}^2 * d_{0,-1}^1 * d_{-1,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [1\phi_\ell + 0\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{286} &= |A_{-1}|^2 [Re(T_{0,1,-1}^1)Re(T_{0,1,1}^2) + Im(T_{0,1,-1}^1)Im(T_{0,1,1}^2)] \\ \omega_{286} &= [(2*1+1)(2*2+1)d_{-1,-1}^1 * d_{1,-1}^2 * d_{0,-1}^1 * d_{0,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [0\phi_\ell + 1\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{287} &= |A_{-1}|^2 [Re(T_{0,1,-1}^1)Re(T_{1,1,1}^2) + Im(T_{0,1,-1}^1)Im(T_{1,1,1}^2)] \\ \omega_{287} &= [(2*1+1)(2*2+1)d_{-1,-1}^1 * d_{1,0}^2 * d_{0,-1}^1 * d_{1,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [-1\phi_\ell + 2\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{288} &= |A_{-1}|^2 [Re(T_{1,1,-1}^1)Re(T_{1,1,-1}^1) + Im(T_{1,1,-1}^1)Im(T_{1,1,-1}^1)] \\ \omega_{288} &= 2[(2*1+1)(2*1+1)d_{-1,0}^1 * d_{1,-1}^1 * d_{1,-1}^1 * d_{1,-1}^1] \end{aligned}$$

$$\begin{aligned} A'_{289} &= |A_{-1}|^2 [Re(T_{1,1,-1}^1)Re(T_{-1,1,-1}^2) + Im(T_{1,1,-1}^1)Im(T_{-1,1,-1}^2)] \\ \omega_{289} &= [(2*1+1)(2*2+1)d_{-1,0}^1 * d_{-1,-2}^2 * d_{1,-1}^1 * d_{-1,-1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [1\phi_\ell + -2\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{290} &= |A_{-1}|^2 [Re(T_{1,1,-1}^1)Re(T_{0,1,-1}^2) + Im(T_{1,1,-1}^1)Im(T_{0,1,-1}^2)] \\ \omega_{290} &= [(2*1+1)(2*2+1)d_{-1,0}^1 * d_{-1,-1}^2 * d_{1,-1}^1 * d_{0,-1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [0\phi_\ell + -1\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{291} &= |A_{-1}|^2 [Re(T_{1,1,-1}^1)Re(T_{1,1,-1}^2) + Im(T_{1,1,-1}^1)Im(T_{1,1,-1}^2)] \\ \omega_{291} &= [(2*1+1)(2*2+1)d_{-1,0}^1 * d_{-1,0}^2 * d_{1,-1}^1 * d_{1,-1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 0\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{292} &= |A_{-1}|^2 [Re(T_{1,1,-1}^1)Re(T_{1,1,0}^0) + Im(T_{1,1,-1}^1)Im(T_{1,1,0}^0)] \\ \omega_{292} &= [(2*1+1)(2*0+1)d_{-1,0}^1 * d_{0,0}^0 * d_{1,-1}^1 * d_{1,-1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 1\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{293} &= |A_{-1}|^2 [Re(T_{1,1,-1}^1)Re(T_{0,1,0}^1) + Im(T_{1,1,-1}^1)Im(T_{0,1,0}^1)] \\ \omega_{293} &= [(2*1+1)(2*1+1)d_{-1,0}^1 * d_{0,-1}^1 * d_{1,-1}^1 * d_{0,-1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [0\phi_\ell + 0\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{294} &= |A_{-1}|^2 [Re(T_{1,1,-1}^1)Re(T_{1,1,0}^1) + Im(T_{1,1,-1}^1)Im(T_{1,1,0}^1)] \\ \omega_{294} &= [(2*1+1)(2*1+1)d_{-1,0}^1 * d_{1,0}^1 * d_{1,-1}^1 * d_{1,-1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 1\phi_Z]) \end{aligned}$$

$$A'_{295} = |A_{-1}|^2 [Re(T_{1,1,-1}^1)Re(T_{-1,1,0}^2) + Im(T_{1,1,-1}^1)Im(T_{-1,1,0}^2)]$$

$$\omega_{295} = [(2 * 1 + 1)(2 * 2 + 1)d_{-1,0}^1 * d_{0,-2}^2 * d_{1,-1}^1 * d_{-1,-1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [1\phi_\ell + -1\phi_Z])$$

$$A'_{296} = |A_{-1}|^2[Re(T_{1,1,-1}^1)Re(T_{0,1,0}^2) + Im(T_{1,1,-1}^1)Im(T_{0,1,0}^2)] \\ \omega_{296} = [(2 * 1 + 1)(2 * 2 + 1)d_{-1,0}^1 * d_{0,-1}^2 * d_{1,-1}^1 * d_{0,-1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [0\phi_\ell + 0\phi_Z])$$

$$A'_{297} = |A_{-1}|^2[Re(T_{1,1,-1}^1)Re(T_{1,1,0}^2) + Im(T_{1,1,-1}^1)Im(T_{1,1,0}^2)] \\ \omega_{297} = [(2 * 1 + 1)(2 * 2 + 1)d_{-1,0}^1 * d_{0,0}^2 * d_{1,-1}^1 * d_{1,-1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 1\phi_Z])$$

$$A'_{298} = |A_{-1}|^2[Re(T_{1,1,-1}^1)Re(T_{0,1,1}^1) + Im(T_{1,1,-1}^1)Im(T_{0,1,1}^1)] \\ \omega_{298} = [(2 * 1 + 1)(2 * 1 + 1)d_{-1,0}^1 * d_{1,-1}^1 * d_{1,-1}^1 * d_{0,-1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{299} = |A_{-1}|^2[Re(T_{1,1,-1}^1)Re(T_{1,1,1}^1) + Im(T_{1,1,-1}^1)Im(T_{1,1,1}^1)] \\ \omega_{299} = [(2 * 1 + 1)(2 * 1 + 1)d_{-1,0}^1 * d_{1,0}^1 * d_{1,-1}^1 * d_{1,-1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 2\phi_Z])$$

$$A'_{300} = |A_{-1}|^2[Re(T_{1,1,-1}^1)Re(T_{-1,1,1}^2) + Im(T_{1,1,-1}^1)Im(T_{-1,1,1}^2)] \\ \omega_{300} = [(2 * 1 + 1)(2 * 2 + 1)d_{-1,0}^1 * d_{1,-2}^2 * d_{1,-1}^1 * d_{-1,-1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [1\phi_\ell + 0\phi_Z])$$

$$A'_{301} = |A_{-1}|^2[Re(T_{1,1,-1}^1)Re(T_{0,1,1}^2) + Im(T_{1,1,-1}^1)Im(T_{0,1,1}^2)] \\ \omega_{301} = [(2 * 1 + 1)(2 * 2 + 1)d_{-1,0}^1 * d_{1,-2}^2 * d_{1,-1}^1 * d_{0,-1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{302} = |A_{-1}|^2[Re(T_{1,1,-1}^1)Re(T_{1,1,1}^2) + Im(T_{1,1,-1}^1)Im(T_{1,1,1}^2)] \\ \omega_{302} = [(2 * 1 + 1)(2 * 2 + 1)d_{-1,0}^1 * d_{1,0}^2 * d_{1,-1}^1 * d_{1,-1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 2\phi_Z])$$

$$A'_{303} = |A_{-1}|^2[Re(T_{-1,1,-1}^2)Re(T_{-1,1,-1}^2) + Im(T_{-1,1,-1}^2)Im(T_{-1,1,-1}^2)] \\ \omega_{303} = 2[(2 * 2 + 1)(2 * 2 + 1)d_{-1,-2}^2 * d_{-1,-2}^2 * d_{-1,-1}^1 * d_{-1,-1}^1]$$

$$A'_{304} = |A_{-1}|^2[Re(T_{-1,1,-1}^2)Re(T_{0,1,-1}^2) + Im(T_{-1,1,-1}^2)Im(T_{0,1,-1}^2)] \\ \omega_{304} = [(2 * 2 + 1)(2 * 2 + 1)d_{-1,-2}^2 * d_{-1,-1}^2 * d_{-1,-1}^1 * d_{0,-1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [0\phi_\ell + -1\phi_Z])$$

$$A'_{305} = |A_{-1}|^2[Re(T_{-1,1,-1}^2)Re(T_{1,1,-1}^2) + Im(T_{-1,1,-1}^2)Im(T_{1,1,-1}^2)] \\ \omega_{305} = [(2 * 2 + 1)(2 * 2 + 1)d_{-1,-2}^2 * d_{-1,0}^2 * d_{-1,-1}^1 * d_{1,-1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [-1\phi_\ell + 0\phi_Z])$$

$$A'_{306} = |A_{-1}|^2[Re(T_{-1,1,-1}^2)Re(T_{1,1,0}^0) + Im(T_{-1,1,-1}^2)Im(T_{1,1,0}^0)] \\ \omega_{306} = [(2 * 2 + 1)(2 * 0 + 1)d_{-1,-2}^2 * d_{0,0}^0 * d_{-1,-1}^1 * d_{1,-1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [-1\phi_\ell + 1\phi_Z])$$

$$A'_{307} = |A_{-1}|^2 [Re(T_{-1,1,-1}^2)Re(T_{0,1,0}^1) + Im(T_{-1,1,-1}^2)Im(T_{0,1,0}^1)] \\ \omega_{307} = [(2*2+1)(2*1+1)d_{-1,-2}^2 * d_{0,-1}^1 * d_{-1,-1}^1 * d_{0,-1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [0\phi_\ell + 0\phi_Z])$$

$$A'_{308} = |A_{-1}|^2 [Re(T_{-1,1,-1}^2)Re(T_{1,1,0}^1) + Im(T_{-1,1,-1}^2)Im(T_{1,1,0}^1)] \\ \omega_{308} = [(2*2+1)(2*1+1)d_{-1,-2}^2 * d_{0,0}^1 * d_{-1,-1}^1 * d_{1,-1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [-1\phi_\ell + 1\phi_Z])$$

$$A'_{309} = |A_{-1}|^2 [Re(T_{-1,1,-1}^2)Re(T_{-1,1,0}^2) + Im(T_{-1,1,-1}^2)Im(T_{-1,1,0}^2)] \\ \omega_{309} = [(2*2+1)(2*2+1)d_{-1,-2}^2 * d_{0,-2}^2 * d_{-1,-1}^1 * d_{-1,-1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [1\phi_\ell + -1\phi_Z])$$

$$A'_{310} = |A_{-1}|^2 [Re(T_{-1,1,-1}^2)Re(T_{0,1,0}^2) + Im(T_{-1,1,-1}^2)Im(T_{0,1,0}^2)] \\ \omega_{310} = [(2*2+1)(2*2+1)d_{-1,-2}^2 * d_{0,-1}^2 * d_{-1,-1}^1 * d_{0,-1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [0\phi_\ell + 0\phi_Z])$$

$$A'_{311} = |A_{-1}|^2 [Re(T_{-1,1,-1}^2)Re(T_{1,1,0}^2) + Im(T_{-1,1,-1}^2)Im(T_{1,1,0}^2)] \\ \omega_{311} = [(2*2+1)(2*2+1)d_{-1,-2}^2 * d_{0,0}^2 * d_{-1,-1}^1 * d_{1,-1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [-1\phi_\ell + 1\phi_Z])$$

$$A'_{312} = |A_{-1}|^2 [Re(T_{-1,1,-1}^2)Re(T_{0,1,1}^1) + Im(T_{-1,1,-1}^2)Im(T_{0,1,1}^1)] \\ \omega_{312} = [(2*2+1)(2*1+1)d_{-1,-2}^2 * d_{1,-1}^1 * d_{-1,-1}^1 * d_{0,-1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{313} = |A_{-1}|^2 [Re(T_{-1,1,-1}^2)Re(T_{1,1,1}^1) + Im(T_{-1,1,-1}^2)Im(T_{1,1,1}^1)] \\ \omega_{313} = [(2*2+1)(2*1+1)d_{-1,-2}^2 * d_{1,0}^1 * d_{-1,-1}^1 * d_{1,-1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [-1\phi_\ell + 2\phi_Z])$$

$$A'_{314} = |A_{-1}|^2 [Re(T_{-1,1,-1}^2)Re(T_{-1,1,1}^2) + Im(T_{-1,1,-1}^2)Im(T_{-1,1,1}^2)] \\ \omega_{314} = [(2*2+1)(2*2+1)d_{-1,-2}^2 * d_{1,-2}^2 * d_{-1,-1}^1 * d_{-1,-1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [1\phi_\ell + 0\phi_Z])$$

$$A'_{315} = |A_{-1}|^2 [Re(T_{-1,1,-1}^2)Re(T_{0,1,1}^2) + Im(T_{-1,1,-1}^2)Im(T_{0,1,1}^2)] \\ \omega_{315} = [(2*2+1)(2*2+1)d_{-1,-2}^2 * d_{1,-1}^2 * d_{-1,-1}^1 * d_{0,-1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{316} = |A_{-1}|^2 [Re(T_{-1,1,-1}^2)Re(T_{1,1,1}^2) + Im(T_{-1,1,-1}^2)Im(T_{1,1,1}^2)] \\ \omega_{316} = [(2*2+1)(2*2+1)d_{-1,-2}^2 * d_{1,0}^2 * d_{-1,-1}^1 * d_{1,-1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [-1\phi_\ell + 2\phi_Z])$$

$$A'_{317} = |A_{-1}|^2 [Re(T_{0,1,-1}^2)Re(T_{0,1,-1}^2) + Im(T_{0,1,-1}^2)Im(T_{0,1,-1}^2)] \\ \omega_{317} = 2[(2*2+1)(2*2+1)d_{-1,-1}^2 * d_{-1,-1}^2 * d_{0,-1}^1 * d_{0,-1}^1]$$

$$A'_{318} = |A_{-1}|^2 [Re(T_{0,1,-1}^2)Re(T_{1,1,-1}^2) + Im(T_{0,1,-1}^2)Im(T_{1,1,-1}^2)] \\ \omega_{318} = [(2*2+1)(2*2+1)d_{-1,-1}^2 * d_{-1,0}^2 * d_{0,-1}^1 * d_{1,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [-1\phi_\ell + 0\phi_Z])$$

$$\begin{aligned}
A'_{319} &= |A_{-1}|^2 [Re(T_{0,1,-1}^2)Re(T_{1,1,0}^0) + Im(T_{0,1,-1}^2)Im(T_{1,1,0}^0)] \\
\omega_{319} &= [(2*2+1)(2*0+1)d_{-1,-1}^2 * d_{0,0}^0 * d_{0,-1}^1 * d_{1,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - \\
&\quad [-1\phi_\ell + 1\phi_Z]) \\
A'_{320} &= |A_{-1}|^2 [Re(T_{0,1,-1}^2)Re(T_{1,1,0}^1) + Im(T_{0,1,-1}^2)Im(T_{1,1,0}^1)] \\
\omega_{320} &= [(2*2+1)(2*1+1)d_{-1,-1}^2 * d_{0,-1}^1 * d_{0,-1}^1 * d_{0,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - \\
&\quad [0\phi_\ell + 0\phi_Z]) \\
A'_{321} &= |A_{-1}|^2 [Re(T_{0,1,-1}^2)Re(T_{1,1,0}^1) + Im(T_{0,1,-1}^2)Im(T_{1,1,0}^1)] \\
\omega_{321} &= [(2*2+1)(2*1+1)d_{-1,-1}^2 * d_{0,0}^1 * d_{0,-1}^1 * d_{1,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - \\
&\quad [-1\phi_\ell + 1\phi_Z]) \\
A'_{322} &= |A_{-1}|^2 [Re(T_{0,1,-1}^2)Re(T_{-1,1,0}^2) + Im(T_{0,1,-1}^2)Im(T_{-1,1,0}^2)] \\
\omega_{322} &= [(2*2+1)(2*2+1)d_{-1,-1}^2 * d_{0,-2}^2 * d_{0,-1}^1 * d_{-1,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - \\
&\quad [1\phi_\ell + -1\phi_Z]) \\
A'_{323} &= |A_{-1}|^2 [Re(T_{0,1,-1}^2)Re(T_{0,1,0}^2) + Im(T_{0,1,-1}^2)Im(T_{0,1,0}^2)] \\
\omega_{323} &= [(2*2+1)(2*2+1)d_{-1,-1}^2 * d_{0,-1}^2 * d_{0,-1}^1 * d_{0,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - \\
&\quad [0\phi_\ell + 0\phi_Z]) \\
A'_{324} &= |A_{-1}|^2 [Re(T_{0,1,-1}^2)Re(T_{1,1,0}^2) + Im(T_{0,1,-1}^2)Im(T_{1,1,0}^2)] \\
\omega_{324} &= [(2*2+1)(2*2+1)d_{-1,-1}^2 * d_{0,0}^2 * d_{0,-1}^1 * d_{1,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - \\
&\quad [-1\phi_\ell + 1\phi_Z]) \\
A'_{325} &= |A_{-1}|^2 [Re(T_{0,1,-1}^2)Re(T_{0,1,1}^1) + Im(T_{0,1,-1}^2)Im(T_{0,1,1}^1)] \\
\omega_{325} &= [(2*2+1)(2*1+1)d_{-1,-1}^2 * d_{1,-1}^1 * d_{0,-1}^1 * d_{0,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - \\
&\quad [0\phi_\ell + 1\phi_Z]) \\
A'_{326} &= |A_{-1}|^2 [Re(T_{0,1,-1}^2)Re(T_{1,1,1}^1) + Im(T_{0,1,-1}^2)Im(T_{1,1,1}^1)] \\
\omega_{326} &= [(2*2+1)(2*1+1)d_{-1,-1}^2 * d_{1,0}^1 * d_{0,-1}^1 * d_{1,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - \\
&\quad [-1\phi_\ell + 2\phi_Z]) \\
A'_{327} &= |A_{-1}|^2 [Re(T_{0,1,-1}^2)Re(T_{-1,1,1}^2) + Im(T_{0,1,-1}^2)Im(T_{-1,1,1}^2)] \\
\omega_{327} &= [(2*2+1)(2*2+1)d_{-1,-1}^2 * d_{1,-2}^2 * d_{0,-1}^1 * d_{-1,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - \\
&\quad [1\phi_\ell + 0\phi_Z]) \\
A'_{328} &= |A_{-1}|^2 [Re(T_{0,1,-1}^2)Re(T_{0,1,1}^2) + Im(T_{0,1,-1}^2)Im(T_{0,1,1}^2)] \\
\omega_{328} &= [(2*2+1)(2*2+1)d_{-1,-1}^2 * d_{1,-1}^2 * d_{0,-1}^1 * d_{0,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - \\
&\quad [0\phi_\ell + 1\phi_Z]) \\
A'_{329} &= |A_{-1}|^2 [Re(T_{0,1,-1}^2)Re(T_{1,1,1}^2) + Im(T_{0,1,-1}^2)Im(T_{1,1,1}^2)] \\
\omega_{329} &= [(2*2+1)(2*2+1)d_{-1,-1}^2 * d_{1,0}^2 * d_{0,-1}^1 * d_{1,-1}^1] * \cos([0\phi_\ell + -1\phi_Z] - \\
&\quad [-1\phi_\ell + 2\phi_Z]) \\
A'_{330} &= |A_{-1}|^2 [Re(T_{1,1,-1}^2)Re(T_{1,1,-1}^2) + Im(T_{1,1,-1}^2)Im(T_{1,1,-1}^2)]
\end{aligned}$$

$$\omega_{330} = 2[(2*2+1)(2*2+1)d_{-1,0}^2 * d_{-1,0}^2 * d_{1,-1}^1 * d_{1,-1}^1]$$

$$A'_{331} = |A_{-1}|^2 [Re(T_{1,1,-1}^2)Re(T_{1,1,0}^0) + Im(T_{1,1,-1}^2)Im(T_{1,1,0}^0)] \\ \omega_{331} = [(2*2+1)(2*0+1)d_{-1,0}^2 * d_{0,0}^0 * d_{1,-1}^1 * d_{1,-1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 1\phi_Z])$$

$$A'_{332} = |A_{-1}|^2 [Re(T_{1,1,-1}^2)Re(T_{0,1,0}^1) + Im(T_{1,1,-1}^2)Im(T_{0,1,0}^1)] \\ \omega_{332} = [(2*2+1)(2*1+1)d_{-1,0}^2 * d_{0,-1}^1 * d_{1,-1}^1 * d_{0,-1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [0\phi_\ell + 0\phi_Z])$$

$$A'_{333} = |A_{-1}|^2 [Re(T_{1,1,-1}^2)Re(T_{1,1,0}^1) + Im(T_{1,1,-1}^2)Im(T_{1,1,0}^1)] \\ \omega_{333} = [(2*2+1)(2*1+1)d_{-1,0}^2 * d_{0,0}^1 * d_{1,-1}^1 * d_{1,-1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 1\phi_Z])$$

$$A'_{334} = |A_{-1}|^2 [Re(T_{1,1,-1}^2)Re(T_{-1,1,0}^2) + Im(T_{1,1,-1}^2)Im(T_{-1,1,0}^2)] \\ \omega_{334} = [(2*2+1)(2*2+1)d_{-1,0}^2 * d_{0,-2}^2 * d_{1,-1}^1 * d_{-1,-1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [1\phi_\ell + -1\phi_Z])$$

$$A'_{335} = |A_{-1}|^2 [Re(T_{1,1,-1}^2)Re(T_{0,1,0}^2) + Im(T_{1,1,-1}^2)Im(T_{0,1,0}^2)] \\ \omega_{335} = [(2*2+1)(2*2+1)d_{-1,0}^2 * d_{0,-1}^2 * d_{1,-1}^1 * d_{0,-1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [0\phi_\ell + 0\phi_Z])$$

$$A'_{336} = |A_{-1}|^2 [Re(T_{1,1,-1}^2)Re(T_{1,1,0}^2) + Im(T_{1,1,-1}^2)Im(T_{1,1,0}^2)] \\ \omega_{336} = [(2*2+1)(2*2+1)d_{-1,0}^2 * d_{0,0}^2 * d_{1,-1}^1 * d_{1,-1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 1\phi_Z])$$

$$A'_{337} = |A_{-1}|^2 [Re(T_{1,1,-1}^2)Re(T_{0,1,1}^1) + Im(T_{1,1,-1}^2)Im(T_{0,1,1}^1)] \\ \omega_{337} = [(2*2+1)(2*1+1)d_{-1,0}^2 * d_{1,-1}^1 * d_{1,-1}^1 * d_{0,-1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{338} = |A_{-1}|^2 [Re(T_{1,1,-1}^2)Re(T_{1,1,1}^1) + Im(T_{1,1,-1}^2)Im(T_{1,1,1}^1)] \\ \omega_{338} = [(2*2+1)(2*1+1)d_{-1,0}^2 * d_{1,0}^1 * d_{1,-1}^1 * d_{1,-1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 2\phi_Z])$$

$$A'_{339} = |A_{-1}|^2 [Re(T_{1,1,-1}^2)Re(T_{-1,1,1}^2) + Im(T_{1,1,-1}^2)Im(T_{-1,1,1}^2)] \\ \omega_{339} = [(2*2+1)(2*2+1)d_{-1,0}^2 * d_{1,-2}^2 * d_{1,-1}^1 * d_{-1,-1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [1\phi_\ell + 0\phi_Z])$$

$$A'_{340} = |A_{-1}|^2 [Re(T_{1,1,-1}^2)Re(T_{0,1,1}^2) + Im(T_{1,1,-1}^2)Im(T_{0,1,1}^2)] \\ \omega_{340} = [(2*2+1)(2*2+1)d_{-1,0}^2 * d_{1,-1}^2 * d_{1,-1}^1 * d_{0,-1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{341} = |A_{-1}|^2 [Re(T_{1,1,-1}^2)Re(T_{1,1,1}^2) + Im(T_{1,1,-1}^2)Im(T_{1,1,1}^2)] \\ \omega_{341} = [(2*2+1)(2*2+1)d_{-1,0}^2 * d_{1,0}^2 * d_{1,-1}^1 * d_{1,-1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 2\phi_Z])$$

$$\begin{aligned}
A'_{342} &= |A_{-1}|^2 [Re(T_{1,1,0}^0)Re(T_{1,1,0}^0) + Im(T_{1,1,0}^0)Im(T_{1,1,0}^0)] \\
\omega_{342} &= 2[(2*0+1)(2*0+1)d_{0,0}^0 * d_{0,0}^0 * d_{1,-1}^1 * d_{1,-1}^1] \\
A'_{343} &= |A_{-1}|^2 [Re(T_{1,1,0}^0)Re(T_{0,1,0}^1) + Im(T_{1,1,0}^0)Im(T_{0,1,0}^1)] \\
\omega_{343} &= [(2*0+1)(2*1+1)d_{0,0}^0 * d_{0,-1}^1 * d_{1,-1}^1 * d_{0,-1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [0\phi_\ell + 0\phi_Z]) \\
A'_{344} &= |A_{-1}|^2 [Re(T_{1,1,0}^0)Re(T_{1,1,0}^1) + Im(T_{1,1,0}^0)Im(T_{1,1,0}^1)] \\
\omega_{344} &= [(2*0+1)(2*1+1)d_{0,0}^0 * d_{0,0}^1 * d_{1,-1}^1 * d_{1,-1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [-1\phi_\ell + 1\phi_Z]) \\
A'_{345} &= |A_{-1}|^2 [Re(T_{1,1,0}^0)Re(T_{-1,1,0}^2) + Im(T_{1,1,0}^0)Im(T_{-1,1,0}^2)] \\
\omega_{345} &= [(2*0+1)(2*2+1)d_{0,0}^0 * d_{0,-2}^2 * d_{1,-1}^1 * d_{-1,-1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [1\phi_\ell + 1\phi_Z]) \\
A'_{346} &= |A_{-1}|^2 [Re(T_{1,1,0}^0)Re(T_{0,1,0}^2) + Im(T_{1,1,0}^0)Im(T_{0,1,0}^2)] \\
\omega_{346} &= [(2*0+1)(2*2+1)d_{0,0}^0 * d_{0,-1}^2 * d_{1,-1}^1 * d_{0,-1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [0\phi_\ell + 0\phi_Z]) \\
A'_{347} &= |A_{-1}|^2 [Re(T_{1,1,0}^0)Re(T_{1,1,0}^2) + Im(T_{1,1,0}^0)Im(T_{1,1,0}^2)] \\
\omega_{347} &= [(2*0+1)(2*2+1)d_{0,0}^0 * d_{0,-1}^2 * d_{1,-1}^1 * d_{1,-1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [-1\phi_\ell + 1\phi_Z]) \\
A'_{348} &= |A_{-1}|^2 [Re(T_{1,1,0}^0)Re(T_{0,1,1}^1) + Im(T_{1,1,0}^0)Im(T_{0,1,1}^1)] \\
\omega_{348} &= [(2*0+1)(2*1+1)d_{0,0}^0 * d_{1,-1}^1 * d_{1,-1}^1 * d_{0,-1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [0\phi_\ell + 1\phi_Z]) \\
A'_{349} &= |A_{-1}|^2 [Re(T_{1,1,0}^0)Re(T_{1,1,1}^1) + Im(T_{1,1,0}^0)Im(T_{1,1,1}^1)] \\
\omega_{349} &= [(2*0+1)(2*1+1)d_{0,0}^0 * d_{1,0}^1 * d_{1,-1}^1 * d_{1,-1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [-1\phi_\ell + 2\phi_Z]) \\
A'_{350} &= |A_{-1}|^2 [Re(T_{1,1,0}^0)Re(T_{-1,1,1}^2) + Im(T_{1,1,0}^0)Im(T_{-1,1,1}^2)] \\
\omega_{350} &= [(2*0+1)(2*2+1)d_{0,0}^0 * d_{1,-2}^2 * d_{1,-1}^1 * d_{-1,-1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [1\phi_\ell + 0\phi_Z]) \\
A'_{351} &= |A_{-1}|^2 [Re(T_{1,1,0}^0)Re(T_{0,1,1}^2) + Im(T_{1,1,0}^0)Im(T_{0,1,1}^2)] \\
\omega_{351} &= [(2*0+1)(2*2+1)d_{0,0}^0 * d_{1,-1}^2 * d_{1,-1}^1 * d_{0,-1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [0\phi_\ell + 1\phi_Z]) \\
A'_{352} &= |A_{-1}|^2 [Re(T_{1,1,0}^0)Re(T_{1,1,1}^2) + Im(T_{1,1,0}^0)Im(T_{1,1,1}^2)] \\
\omega_{352} &= [(2*0+1)(2*2+1)d_{0,0}^0 * d_{1,0}^2 * d_{1,-1}^1 * d_{1,-1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [-1\phi_\ell + 2\phi_Z]) \\
A'_{353} &= |A_{-1}|^2 [Re(T_{0,1,0}^1)Re(T_{0,1,0}^1) + Im(T_{0,1,0}^1)Im(T_{0,1,0}^1)] \\
\omega_{353} &= 2[(2*1+1)(2*1+1)d_{0,-1}^1 * d_{0,-1}^1 * d_{0,-1}^1 * d_{0,-1}^1] \\
A'_{354} &= |A_{-1}|^2 [Re(T_{0,1,0}^1)Re(T_{1,1,0}^1) + Im(T_{0,1,0}^1)Im(T_{1,1,0}^1)] \\
\omega_{354} &= [(2*1+1)(2*1+1)d_{0,-1}^1 * d_{0,0}^1 * d_{0,-1}^1 * d_{1,-1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 1\phi_Z]) \\
A'_{355} &= |A_{-1}|^2 [Re(T_{0,1,0}^1)Re(T_{-1,1,0}^2) + Im(T_{0,1,0}^1)Im(T_{-1,1,0}^2)] \\
\omega_{355} &= [(2*1+1)(2*2+1)d_{0,-1}^1 * d_{0,-2}^2 * d_{0,-1}^1 * d_{-1,-1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [1\phi_\ell + 1\phi_Z]) \\
A'_{356} &= |A_{-1}|^2 [Re(T_{0,1,0}^1)Re(T_{0,1,0}^2) + Im(T_{0,1,0}^1)Im(T_{0,1,0}^2)]
\end{aligned}$$

$$\begin{aligned}
\omega_{356} &= [(2*1+1)(2*2+1)d_{0,-1}^1 * d_{0,-1}^2 * d_{0,-1}^1 * d_{0,-1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [0\phi_\ell + 0\phi_Z]) \\
A'_{357} &= |A_{-1}|^2 [Re(T_{0,1,0}^1)Re(T_{1,1,0}^2) + Im(T_{0,1,0}^1)Im(T_{1,1,0}^2)] \\
\omega_{357} &= [(2*1+1)(2*2+1)d_{0,-1}^1 * d_{0,0}^2 * d_{0,-1}^1 * d_{1,-1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 1\phi_Z]) \\
A'_{358} &= |A_{-1}|^2 [Re(T_{0,1,0}^1)Re(T_{0,1,1}^1) + Im(T_{0,1,0}^1)Im(T_{0,1,1}^1)] \\
\omega_{358} &= [(2*1+1)(2*1+1)d_{0,-1}^1 * d_{1,-1}^1 * d_{0,-1}^1 * d_{0,-1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [0\phi_\ell + 1\phi_Z]) \\
A'_{359} &= |A_{-1}|^2 [Re(T_{0,1,0}^1)Re(T_{1,1,1}^1) + Im(T_{0,1,0}^1)Im(T_{1,1,1}^1)] \\
\omega_{359} &= [(2*1+1)(2*1+1)d_{0,-1}^1 * d_{1,0}^1 * d_{0,-1}^1 * d_{1,-1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 2\phi_Z]) \\
A'_{360} &= |A_{-1}|^2 [Re(T_{0,1,0}^1)Re(T_{-1,1,1}^2) + Im(T_{0,1,0}^1)Im(T_{-1,1,1}^2)] \\
\omega_{360} &= [(2*1+1)(2*2+1)d_{0,-1}^1 * d_{1,-2}^2 * d_{0,-1}^1 * d_{-1,-1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [1\phi_\ell + 0\phi_Z]) \\
A'_{361} &= |A_{-1}|^2 [Re(T_{0,1,0}^1)Re(T_{0,1,1}^2) + Im(T_{0,1,0}^1)Im(T_{0,1,1}^2)] \\
\omega_{361} &= [(2*1+1)(2*2+1)d_{0,-1}^1 * d_{1,-1}^2 * d_{0,-1}^1 * d_{0,-1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [0\phi_\ell + 1\phi_Z]) \\
A'_{362} &= |A_{-1}|^2 [Re(T_{0,1,0}^1)Re(T_{1,1,1}^2) + Im(T_{0,1,0}^1)Im(T_{1,1,1}^2)] \\
\omega_{362} &= [(2*1+1)(2*2+1)d_{0,-1}^1 * d_{1,0}^2 * d_{0,-1}^1 * d_{1,-1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 2\phi_Z]) \\
A'_{363} &= |A_{-1}|^2 [Re(T_{1,1,0}^1)Re(T_{1,1,0}^1) + Im(T_{1,1,0}^1)Im(T_{1,1,0}^1)] \\
\omega_{363} &= 2[(2*1+1)(2*1+1)d_{0,0}^1 * d_{0,0}^1 * d_{1,-1}^1 * d_{1,-1}^1] \\
A'_{364} &= |A_{-1}|^2 [Re(T_{1,1,0}^1)Re(T_{-1,1,0}^2) + Im(T_{1,1,0}^1)Im(T_{-1,1,0}^2)] \\
\omega_{364} &= [(2*1+1)(2*2+1)d_{0,0}^1 * d_{0,-2}^2 * d_{1,-1}^1 * d_{-1,-1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [1\phi_\ell + -1\phi_Z]) \\
A'_{365} &= |A_{-1}|^2 [Re(T_{1,1,0}^1)Re(T_{0,1,0}^2) + Im(T_{1,1,0}^1)Im(T_{0,1,0}^2)] \\
\omega_{365} &= [(2*1+1)(2*2+1)d_{0,0}^1 * d_{0,-1}^2 * d_{1,-1}^1 * d_{0,-1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [0\phi_\ell + 0\phi_Z]) \\
A'_{366} &= |A_{-1}|^2 [Re(T_{1,1,0}^1)Re(T_{1,1,0}^2) + Im(T_{1,1,0}^1)Im(T_{1,1,0}^2)] \\
\omega_{366} &= [(2*1+1)(2*2+1)d_{0,0}^1 * d_{0,0}^2 * d_{1,-1}^1 * d_{1,-1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [-1\phi_\ell + 1\phi_Z]) \\
A'_{367} &= |A_{-1}|^2 [Re(T_{1,1,0}^1)Re(T_{0,1,1}^1) + Im(T_{1,1,0}^1)Im(T_{0,1,1}^1)] \\
\omega_{367} &= [(2*1+1)(2*1+1)d_{0,0}^1 * d_{1,-1}^1 * d_{1,-1}^1 * d_{0,-1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [0\phi_\ell + 1\phi_Z]) \\
A'_{368} &= |A_{-1}|^2 [Re(T_{1,1,0}^1)Re(T_{1,1,1}^1) + Im(T_{1,1,0}^1)Im(T_{1,1,1}^1)] \\
\omega_{368} &= [(2*1+1)(2*1+1)d_{0,0}^1 * d_{1,0}^1 * d_{1,-1}^1 * d_{1,-1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [-1\phi_\ell + 2\phi_Z]) \\
A'_{369} &= |A_{-1}|^2 [Re(T_{1,1,0}^1)Re(T_{-1,1,1}^2) + Im(T_{1,1,0}^1)Im(T_{-1,1,1}^2)] \\
\omega_{369} &= [(2*1+1)(2*2+1)d_{0,0}^1 * d_{1,-2}^2 * d_{1,-1}^1 * d_{-1,-1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [1\phi_\ell + 0\phi_Z]) \\
A'_{370} &= |A_{-1}|^2 [Re(T_{1,1,0}^1)Re(T_{0,1,1}^2) + Im(T_{1,1,0}^1)Im(T_{0,1,1}^2)] \\
\omega_{370} &= [(2*1+1)(2*2+1)d_{0,0}^1 * d_{1,-1}^2 * d_{1,-1}^1 * d_{0,-1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [0\phi_\ell + 1\phi_Z])
\end{aligned}$$

$$\begin{aligned}
A'_{371} &= |A_{-1}|^2 [Re(T_{1,1,0}^1)Re(T_{1,1,1}^2) + Im(T_{1,1,0}^1)Im(T_{1,1,1}^2)] \\
\omega_{371} &= [(2*1+1)(2*2+1)d_{0,0}^1 * d_{1,0}^2 * d_{1,-1}^1 * d_{1,-1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [-1\phi_\ell + 2\phi_Z]) \\
A'_{372} &= |A_{-1}|^2 [Re(T_{-1,1,0}^2)Re(T_{-1,1,1}^2) + Im(T_{-1,1,0}^2)Im(T_{-1,1,1}^2)] \\
\omega_{372} &= [2(2*2+1)(2*2+1)d_{0,-2}^2 * d_{0,-2}^2 * d_{-1,-1}^1 * d_{-1,-1}^1] \\
A'_{373} &= |A_{-1}|^2 [Re(T_{-1,1,0}^2)Re(T_{0,1,0}^2) + Im(T_{-1,1,0}^2)Im(T_{0,1,0}^2)] \\
\omega_{373} &= [(2*2+1)(2*2+1)d_{0,-2}^2 * d_{0,-1}^2 * d_{-1,-1}^1 * d_{0,-1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [0\phi_\ell + 0\phi_Z]) \\
A'_{374} &= |A_{-1}|^2 [Re(T_{-1,1,0}^2)Re(T_{1,1,0}^2) + Im(T_{-1,1,0}^2)Im(T_{1,1,0}^2)] \\
\omega_{374} &= [(2*2+1)(2*2+1)d_{0,-2}^2 * d_{0,0}^2 * d_{-1,-1}^1 * d_{1,-1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [-1\phi_\ell + 1\phi_Z]) \\
A'_{375} &= |A_{-1}|^2 [Re(T_{-1,1,0}^2)Re(T_{0,1,1}^1) + Im(T_{-1,1,0}^2)Im(T_{0,1,1}^1)] \\
\omega_{375} &= [(2*2+1)(2*1+1)d_{0,-2}^2 * d_{1,-1}^1 * d_{-1,-1}^1 * d_{0,-1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [0\phi_\ell + 1\phi_Z]) \\
A'_{376} &= |A_{-1}|^2 [Re(T_{-1,1,0}^2)Re(T_{1,1,1}^1) + Im(T_{-1,1,0}^2)Im(T_{1,1,1}^1)] \\
\omega_{376} &= [(2*2+1)(2*1+1)d_{0,-2}^2 * d_{1,0}^1 * d_{-1,-1}^1 * d_{1,-1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [-1\phi_\ell + 2\phi_Z]) \\
A'_{377} &= |A_{-1}|^2 [Re(T_{-1,1,0}^2)Re(T_{-1,1,1}^2) + Im(T_{-1,1,0}^2)Im(T_{-1,1,1}^2)] \\
\omega_{377} &= [(2*2+1)(2*2+1)d_{0,-2}^2 * d_{1,-2}^2 * d_{-1,-1}^1 * d_{-1,-1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [1\phi_\ell + 0\phi_Z]) \\
A'_{378} &= |A_{-1}|^2 [Re(T_{-1,1,0}^2)Re(T_{0,1,1}^2) + Im(T_{-1,1,0}^2)Im(T_{0,1,1}^2)] \\
\omega_{378} &= [(2*2+1)(2*2+1)d_{0,-2}^2 * d_{1,-1}^2 * d_{-1,-1}^1 * d_{0,-1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [0\phi_\ell + 1\phi_Z]) \\
A'_{379} &= |A_{-1}|^2 [Re(T_{-1,1,0}^2)Re(T_{1,1,1}^2) + Im(T_{-1,1,0}^2)Im(T_{1,1,1}^2)] \\
\omega_{379} &= [(2*2+1)(2*2+1)d_{0,-2}^2 * d_{1,0}^2 * d_{-1,-1}^1 * d_{1,-1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [-1\phi_\ell + 2\phi_Z]) \\
A'_{380} &= |A_{-1}|^2 [Re(T_{0,1,0}^2)Re(T_{0,1,0}^2) + Im(T_{0,1,0}^2)Im(T_{0,1,0}^2)] \\
\omega_{380} &= [2(2*2+1)(2*2+1)d_{0,-1}^2 * d_{0,-1}^2 * d_{0,-1}^1 * d_{0,-1}^1] \\
A'_{381} &= |A_{-1}|^2 [Re(T_{0,1,0}^2)Re(T_{1,1,0}^2) + Im(T_{0,1,0}^2)Im(T_{1,1,0}^2)] \\
\omega_{381} &= [(2*2+1)(2*2+1)d_{0,-1}^2 * d_{0,0}^2 * d_{0,-1}^1 * d_{1,-1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 1\phi_Z]) \\
A'_{382} &= |A_{-1}|^2 [Re(T_{0,1,0}^2)Re(T_{0,1,1}^1) + Im(T_{0,1,0}^2)Im(T_{0,1,1}^1)] \\
\omega_{382} &= [(2*2+1)(2*1+1)d_{0,-1}^2 * d_{1,-1}^1 * d_{0,-1}^1 * d_{0,-1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [0\phi_\ell + 1\phi_Z]) \\
A'_{383} &= |A_{-1}|^2 [Re(T_{0,1,0}^2)Re(T_{1,1,1}^1) + Im(T_{0,1,0}^2)Im(T_{1,1,1}^1)] \\
\omega_{383} &= [(2*2+1)(2*1+1)d_{0,-1}^2 * d_{1,0}^1 * d_{0,-1}^1 * d_{1,-1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 2\phi_Z])
\end{aligned}$$

$$\begin{aligned}
A'_{384} &= |A_{-1}|^2 [Re(T_{0,1,0}^2)Re(T_{-1,1,1}^2) + Im(T_{0,1,0}^2)Im(T_{-1,1,1}^2)] \\
\omega_{384} &= [(2*2+1)(2*2+1)d_{0,-1}^2 * d_{1,-2}^2 * d_{0,-1}^1 * d_{-1,-1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [1\phi_\ell + 0\phi_Z]) \\
A'_{385} &= |A_{-1}|^2 [Re(T_{0,1,0}^2)Re(T_{0,1,1}^2) + Im(T_{0,1,0}^2)Im(T_{0,1,1}^2)] \\
\omega_{385} &= [(2*2+1)(2*2+1)d_{0,-1}^2 * d_{1,-1}^2 * d_{0,-1}^1 * d_{0,-1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [0\phi_\ell + 1\phi_Z]) \\
A'_{386} &= |A_{-1}|^2 [Re(T_{0,1,0}^2)Re(T_{1,1,1}^2) + Im(T_{0,1,0}^2)Im(T_{1,1,1}^2)] \\
\omega_{386} &= [(2*2+1)(2*2+1)d_{0,-1}^2 * d_{1,0}^2 * d_{0,-1}^1 * d_{1,-1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 2\phi_Z]) \\
A'_{387} &= |A_{-1}|^2 [Re(T_{1,1,0}^2)Re(T_{1,1,0}^2) + Im(T_{1,1,0}^2)Im(T_{1,1,0}^2)] \\
\omega_{387} &= 2[(2*2+1)(2*2+1)d_{0,0}^2 * d_{0,0}^2 * d_{1,-1}^1 * d_{1,-1}^1] \\
A'_{388} &= |A_{-1}|^2 [Re(T_{1,1,0}^2)Re(T_{0,1,1}^1) + Im(T_{1,1,0}^2)Im(T_{0,1,1}^1)] \\
\omega_{388} &= [(2*2+1)(2*1+1)d_{0,0}^2 * d_{1,-1}^1 * d_{1,-1}^1 * d_{0,-1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [0\phi_\ell + 1\phi_Z]) \\
A'_{389} &= |A_{-1}|^2 [Re(T_{1,1,0}^2)Re(T_{1,1,1}^1) + Im(T_{1,1,0}^2)Im(T_{1,1,1}^1)] \\
\omega_{389} &= [(2*2+1)(2*1+1)d_{0,0}^2 * d_{1,0}^1 * d_{1,-1}^1 * d_{1,-1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [-1\phi_\ell + 2\phi_Z]) \\
A'_{390} &= |A_{-1}|^2 [Re(T_{1,1,0}^2)Re(T_{-1,1,1}^2) + Im(T_{1,1,0}^2)Im(T_{-1,1,1}^2)] \\
\omega_{390} &= [(2*2+1)(2*2+1)d_{0,0}^2 * d_{1,-2}^2 * d_{1,-1}^1 * d_{-1,-1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [1\phi_\ell + 0\phi_Z]) \\
A'_{391} &= |A_{-1}|^2 [Re(T_{1,1,0}^2)Re(T_{0,1,1}^2) + Im(T_{1,1,0}^2)Im(T_{0,1,1}^2)] \\
\omega_{391} &= [(2*2+1)(2*2+1)d_{0,0}^2 * d_{1,-1}^2 * d_{1,-1}^1 * d_{0,-1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [0\phi_\ell + 1\phi_Z]) \\
A'_{392} &= |A_{-1}|^2 [Re(T_{1,1,0}^2)Re(T_{1,1,1}^2) + Im(T_{1,1,0}^2)Im(T_{1,1,1}^2)] \\
\omega_{392} &= [(2*2+1)(2*2+1)d_{0,0}^2 * d_{1,0}^2 * d_{1,-1}^1 * d_{1,-1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [-1\phi_\ell + 2\phi_Z]) \\
A'_{393} &= |A_{-1}|^2 [Re(T_{0,1,1}^1)Re(T_{0,1,1}^1) + Im(T_{0,1,1}^1)Im(T_{0,1,1}^1)] \\
\omega_{393} &= 2[(2*1+1)(2*1+1)d_{1,-1}^1 * d_{1,-1}^1 * d_{0,-1}^1 * d_{0,-1}^1] \\
A'_{394} &= |A_{-1}|^2 [Re(T_{0,1,1}^1)Re(T_{1,1,1}^1) + Im(T_{0,1,1}^1)Im(T_{1,1,1}^1)] \\
\omega_{394} &= [(2*1+1)(2*1+1)d_{1,-1}^1 * d_{1,0}^1 * d_{0,-1}^1 * d_{1,-1}^1] * \cos([0\phi_\ell + 1\phi_Z] - [-1\phi_\ell + 2\phi_Z]) \\
A'_{395} &= |A_{-1}|^2 [Re(T_{0,1,1}^1)Re(T_{-1,1,1}^2) + Im(T_{0,1,1}^1)Im(T_{-1,1,1}^2)] \\
\omega_{395} &= [(2*1+1)(2*2+1)d_{1,-1}^1 * d_{1,-2}^2 * d_{0,-1}^1 * d_{-1,-1}^1] * \cos([0\phi_\ell + 1\phi_Z] - [1\phi_\ell + 0\phi_Z]) \\
A'_{396} &= |A_{-1}|^2 [Re(T_{0,1,1}^1)Re(T_{0,1,1}^2) + Im(T_{0,1,1}^1)Im(T_{0,1,1}^2)] \\
\omega_{396} &= [(2*1+1)(2*2+1)d_{1,-1}^1 * d_{1,-1}^2 * d_{0,-1}^1 * d_{0,-1}^1] * \cos([0\phi_\ell + 1\phi_Z] - [0\phi_\ell + 1\phi_Z]) \\
A'_{397} &= |A_{-1}|^2 [Re(T_{0,1,1}^1)Re(T_{1,1,1}^2) + Im(T_{0,1,1}^1)Im(T_{1,1,1}^2)] \\
\omega_{397} &= [(2*1+1)(2*2+1)d_{1,-1}^1 * d_{1,0}^2 * d_{0,-1}^1 * d_{1,-1}^1] * \cos([0\phi_\ell + 1\phi_Z] - [-1\phi_\ell + 2\phi_Z]) \\
A'_{398} &= |A_{-1}|^2 [Re(T_{0,1,1}^1)Re(T_{1,1,1}^1) + Im(T_{0,1,1}^1)Im(T_{1,1,1}^1)] \\
\omega_{398} &= 2[(2*1+1)(2*1+1)d_{1,0}^1 * d_{1,0}^1 * d_{1,-1}^1 * d_{1,-1}^1]
\end{aligned}$$

$$A'_{399} = |A_{-1}|^2 [Re(T_{1,1,1}^1)Re(T_{-1,1,1}^2) + Im(T_{1,1,1}^1)Im(T_{-1,1,1}^2)] \\ \omega_{399} = [(2*1+1)(2*2+1)d_{1,0}^1 * d_{1,-2}^2 * d_{1,-1}^1 * d_{-1,-1}^1] * \cos([-1\phi_\ell + 2\phi_Z] - [1\phi_\ell + 0\phi_Z])$$

$$A'_{400} = |A_{-1}|^2 [Re(T_{1,1,1}^1)Re(T_{0,1,1}^2) + Im(T_{1,1,1}^1)Im(T_{0,1,1}^2)] \\ \omega_{400} = [(2*1+1)(2*2+1)d_{1,0}^1 * d_{1,-1}^2 * d_{0,-1}^1] * \cos([-1\phi_\ell + 2\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{401} = |A_{-1}|^2 [Re(T_{1,1,1}^1)Re(T_{1,1,1}^2) + Im(T_{1,1,1}^1)Im(T_{1,1,1}^2)] \\ \omega_{401} = [(2*1+1)(2*2+1)d_{1,0}^1 * d_{1,0}^2 * d_{1,-1}^1 * d_{-1,-1}^1] * \cos([-1\phi_\ell + 2\phi_Z] - [-1\phi_\ell + 2\phi_Z])$$

$$A'_{402} = |A_{-1}|^2 [Re(T_{-1,1,1}^2)Re(T_{-1,1,1}^2) + Im(T_{-1,1,1}^2)Im(T_{-1,1,1}^2)] \\ \omega_{402} = 2[(2*2+1)(2*2+1)d_{1,-2}^2 * d_{1,-2}^2 * d_{-1,-1}^1 * d_{-1,-1}^1]$$

$$A'_{403} = |A_{-1}|^2 [Re(T_{-1,1,1}^2)Re(T_{0,1,1}^2) + Im(T_{-1,1,1}^2)Im(T_{0,1,1}^2)] \\ \omega_{403} = [(2*2+1)(2*2+1)d_{1,-2}^2 * d_{1,-1}^2 * d_{-1,-1}^1 * d_{0,-1}^1] * \cos([1\phi_\ell + 0\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{404} = |A_{-1}|^2 [Re(T_{-1,1,1}^2)Re(T_{1,1,1}^2) + Im(T_{-1,1,1}^2)Im(T_{1,1,1}^2)] \\ \omega_{404} = [(2*2+1)(2*2+1)d_{1,-2}^2 * d_{1,0}^2 * d_{-1,-1}^1 * d_{1,-1}^1] * \cos([1\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 2\phi_Z])$$

$$A'_{405} = |A_{-1}|^2 [Re(T_{0,1,1}^2)Re(T_{0,1,1}^2) + Im(T_{0,1,1}^2)Im(T_{0,1,1}^2)] \\ \omega_{405} = 2[(2*2+1)(2*2+1)d_{1,-1}^2 * d_{1,-1}^2 * d_{0,-1}^1 * d_{0,-1}^1]$$

$$A'_{406} = |A_{-1}|^2 [Re(T_{0,1,1}^2)Re(T_{1,1,1}^2) + Im(T_{0,1,1}^2)Im(T_{1,1,1}^2)] \\ \omega_{406} = [(2*2+1)(2*2+1)d_{1,-1}^2 * d_{1,0}^2 * d_{0,-1}^1 * d_{1,-1}^1] * \cos([0\phi_\ell + 1\phi_Z] - [-1\phi_\ell + 2\phi_Z])$$

$$A'_{407} = |A_{-1}|^2 [Re(T_{1,1,1}^2)Re(T_{1,1,1}^2) + Im(T_{1,1,1}^2)Im(T_{1,1,1}^2)] \\ \omega_{407} = 2[(2*2+1)(2*2+1)d_{1,0}^2 * d_{1,0}^2 * d_{1,-1}^1 * d_{1,-1}^1]$$

$$A'_{408} = |A_1|^2 [Re(T_{0,1,-1}^1)Re(T_{0,1,-1}^1) + Im(T_{0,1,-1}^1)Im(T_{0,1,-1}^1)] \\ \omega_{408} = 2[(2*1+1)(2*1+1)d_{-1,-1}^1 * d_{-1,-1}^1 * d_{0,1}^1 * d_{0,1}^1]$$

$$A'_{409} = |A_1|^2 [Re(T_{0,1,-1}^1)Re(T_{1,1,-1}^1) + Im(T_{0,1,-1}^1)Im(T_{1,1,-1}^1)] \\ \omega_{409} = [(2*1+1)(2*1+1)d_{-1,-1}^1 * d_{-1,0}^1 * d_{0,1}^1 * d_{1,1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [-1\phi_\ell + 0\phi_Z])$$

$$A'_{410} = |A_1|^2 [Re(T_{0,1,-1}^1)Re(T_{-1,1,-1}^2) + Im(T_{0,1,-1}^1)Im(T_{-1,1,-1}^2)] \\ \omega_{410} = [(2*1+1)(2*2+1)d_{-1,-1}^1 * d_{-1,-2}^2 * d_{0,1}^1 * d_{-1,1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [1\phi_\ell + -2\phi_Z])$$

$$A'_{411} = |A_1|^2 [Re(T_{0,1,-1}^1)Re(T_{0,1,-1}^2) + Im(T_{0,1,-1}^1)Im(T_{0,1,-1}^2)] \\ \omega_{411} = [(2*1+1)(2*2+1)d_{-1,-1}^1 * d_{-1,-1}^2 * d_{0,1}^1 * d_{0,1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [0\phi_\ell + -1\phi_Z])$$

$$A'_{412} = |A_1|^2 [Re(T_{0,1,-1}^1)Re(T_{1,1,-1}^2) + Im(T_{0,1,-1}^1)Im(T_{1,1,-1}^2)] \\ \omega_{412} = [(2*1+1)(2*2+1)d_{-1,-1}^1 * d_{-1,0}^2 * d_{0,1}^1 * d_{1,1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [0\phi_\ell + -1\phi_Z])$$

$$[-1\phi_\ell + 0\phi_Z])$$

$$\begin{aligned} A'_{413} &= |A_1|^2 [Re(T_{0,1,-1}^1)Re(T_{1,1,0}^0) + Im(T_{0,1,-1}^1)Im(T_{1,1,0}^0)] \\ \omega_{413} &= [(2*1+1)(2*0+1)d_{-1,-1}^1 * d_{0,0}^0 * d_{0,1}^1 * d_{1,1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [-1\phi_\ell + 1\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{414} &= |A_1|^2 [Re(T_{0,1,-1}^1)Re(T_{0,1,0}^1) + Im(T_{0,1,-1}^1)Im(T_{0,1,0}^1)] \\ \omega_{414} &= [(2*1+1)(2*1+1)d_{-1,-1}^1 * d_{0,-1}^1 * d_{0,1}^1 * d_{0,1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [0\phi_\ell + 0\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{415} &= |A_1|^2 [Re(T_{0,1,-1}^1)Re(T_{1,1,0}^1) + Im(T_{0,1,-1}^1)Im(T_{1,1,0}^1)] \\ \omega_{415} &= [(2*1+1)(2*1+1)d_{-1,-1}^1 * d_{0,0}^1 * d_{0,1}^1 * d_{1,1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [-1\phi_\ell + 1\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{416} &= |A_1|^2 [Re(T_{0,1,-1}^1)Re(T_{-1,1,0}^2) + Im(T_{0,1,-1}^1)Im(T_{-1,1,0}^2)] \\ \omega_{416} &= [(2*1+1)(2*2+1)d_{-1,-1}^1 * d_{0,-2}^2 * d_{0,1}^1 * d_{-1,1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [1\phi_\ell + -1\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{417} &= |A_1|^2 [Re(T_{0,1,-1}^1)Re(T_{0,1,0}^2) + Im(T_{0,1,-1}^1)Im(T_{0,1,0}^2)] \\ \omega_{417} &= [(2*1+1)(2*2+1)d_{-1,-1}^1 * d_{0,-1}^2 * d_{0,1}^1 * d_{0,1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [0\phi_\ell + 0\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{418} &= |A_1|^2 [Re(T_{0,1,-1}^1)Re(T_{1,1,0}^2) + Im(T_{0,1,-1}^1)Im(T_{1,1,0}^2)] \\ \omega_{418} &= [(2*1+1)(2*2+1)d_{-1,-1}^1 * d_{0,0}^2 * d_{0,1}^1 * d_{1,1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [-1\phi_\ell + 1\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{419} &= |A_1|^2 [Re(T_{0,1,-1}^1)Re(T_{0,1,1}^1) + Im(T_{0,1,-1}^1)Im(T_{0,1,1}^1)] \\ \omega_{419} &= [(2*1+1)(2*1+1)d_{-1,-1}^1 * d_{1,-1}^1 * d_{0,1}^1 * d_{0,1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [0\phi_\ell + 1\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{420} &= |A_1|^2 [Re(T_{0,1,-1}^1)Re(T_{1,1,1}^1) + Im(T_{0,1,-1}^1)Im(T_{1,1,1}^1)] \\ \omega_{420} &= [(2*1+1)(2*1+1)d_{-1,-1}^1 * d_{1,0}^1 * d_{0,1}^1 * d_{1,1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [-1\phi_\ell + 2\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{421} &= |A_1|^2 [Re(T_{0,1,-1}^1)Re(T_{-1,1,1}^2) + Im(T_{0,1,-1}^1)Im(T_{-1,1,1}^2)] \\ \omega_{421} &= [(2*1+1)(2*2+1)d_{-1,-1}^1 * d_{1,-2}^2 * d_{0,1}^1 * d_{-1,1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [1\phi_\ell + 0\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{422} &= |A_1|^2 [Re(T_{0,1,-1}^1)Re(T_{0,1,1}^2) + Im(T_{0,1,-1}^1)Im(T_{0,1,1}^2)] \\ \omega_{422} &= [(2*1+1)(2*2+1)d_{-1,-1}^1 * d_{1,-1}^2 * d_{0,1}^1 * d_{0,1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [0\phi_\ell + 1\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{423} &= |A_1|^2 [Re(T_{0,1,-1}^1)Re(T_{1,1,1}^2) + Im(T_{0,1,-1}^1)Im(T_{1,1,1}^2)] \\ \omega_{423} &= [(2*1+1)(2*2+1)d_{-1,-1}^1 * d_{1,0}^2 * d_{0,1}^1 * d_{1,1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [-1\phi_\ell + 2\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{424} &= |A_1|^2 [Re(T_{1,1,-1}^1)Re(T_{1,1,-1}^1) + Im(T_{1,1,-1}^1)Im(T_{1,1,-1}^1)] \\ \omega_{424} &= 2[(2*1+1)(2*1+1)d_{-1,0}^1 * d_{-1,0}^1 * d_{1,1}^1 * d_{1,1}^1] \end{aligned}$$

$$\begin{aligned} A'_{425} &= |A_1|^2 [Re(T_{1,1,-1}^1)Re(T_{-1,1,-1}^2) + Im(T_{1,1,-1}^1)Im(T_{-1,1,-1}^2)] \\ \omega_{425} &= [(2*1+1)(2*2+1)d_{-1,0}^1 * d_{-1,-2}^2 * d_{1,1}^1 * d_{-1,1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [1\phi_\ell + -2\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{426} &= |A_1|^2 [Re(T_{1,1,-1}^1)Re(T_{0,1,-1}^2) + Im(T_{1,1,-1}^1)Im(T_{0,1,-1}^2)] \\ \omega_{426} &= [(2*1+1)(2*2+1)d_{-1,0}^1 * d_{-1,-1}^2 * d_{1,1}^1 * d_{0,1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [0\phi_\ell + 1\phi_Z]) \end{aligned}$$

$$-1\phi_Z])$$

$$\begin{aligned} A'_{427} &= |A_1|^2 [Re(T_{1,1,-1}^1)Re(T_{1,1,-1}^2) + Im(T_{1,1,-1}^1)Im(T_{1,1,-1}^2)] \\ \omega_{427} &= [(2*1+1)(2*2+1)d_{-1,0}^1 * d_{-1,0}^2 * d_{1,1}^1 * d_{1,1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 0\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{428} &= |A_1|^2 [Re(T_{1,1,-1}^1)Re(T_{1,1,0}^0) + Im(T_{1,1,-1}^1)Im(T_{1,1,0}^0)] \\ \omega_{428} &= [(2*1+1)(2*0+1)d_{-1,0}^1 * d_{0,0}^0 * d_{1,1}^1 * d_{1,1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 1\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{429} &= |A_1|^2 [Re(T_{1,1,-1}^1)Re(T_{0,1,0}^1) + Im(T_{1,1,-1}^1)Im(T_{0,1,0}^1)] \\ \omega_{429} &= [(2*1+1)(2*1+1)d_{-1,0}^1 * d_{0,-1}^1 * d_{1,1}^1 * d_{0,1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [0\phi_\ell + 0\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{430} &= |A_1|^2 [Re(T_{1,1,-1}^1)Re(T_{1,1,0}^1) + Im(T_{1,1,-1}^1)Im(T_{1,1,0}^1)] \\ \omega_{430} &= [(2*1+1)(2*1+1)d_{-1,0}^1 * d_{0,0}^1 * d_{1,1}^1 * d_{1,1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 1\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{431} &= |A_1|^2 [Re(T_{1,1,-1}^1)Re(T_{-1,1,0}^2) + Im(T_{1,1,-1}^1)Im(T_{-1,1,0}^2)] \\ \omega_{431} &= [(2*1+1)(2*2+1)d_{-1,0}^1 * d_{0,-2}^2 * d_{1,1}^1 * d_{-1,1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [1\phi_\ell + -1\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{432} &= |A_1|^2 [Re(T_{1,1,-1}^1)Re(T_{0,1,0}^2) + Im(T_{1,1,-1}^1)Im(T_{0,1,0}^2)] \\ \omega_{432} &= [(2*1+1)(2*2+1)d_{-1,0}^1 * d_{0,-1}^2 * d_{1,1}^1 * d_{0,1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [0\phi_\ell + 0\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{433} &= |A_1|^2 [Re(T_{1,1,-1}^1)Re(T_{1,1,0}^2) + Im(T_{1,1,-1}^1)Im(T_{1,1,0}^2)] \\ \omega_{433} &= [(2*1+1)(2*2+1)d_{-1,0}^1 * d_{0,0}^2 * d_{1,1}^1 * d_{1,1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 1\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{434} &= |A_1|^2 [Re(T_{1,1,-1}^1)Re(T_{0,1,1}^1) + Im(T_{1,1,-1}^1)Im(T_{0,1,1}^1)] \\ \omega_{434} &= [(2*1+1)(2*1+1)d_{-1,0}^1 * d_{1,-1}^1 * d_{1,1}^1 * d_{0,1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [0\phi_\ell + 1\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{435} &= |A_1|^2 [Re(T_{1,1,-1}^1)Re(T_{1,1,1}^1) + Im(T_{1,1,-1}^1)Im(T_{1,1,1}^1)] \\ \omega_{435} &= [(2*1+1)(2*1+1)d_{-1,0}^1 * d_{1,0}^1 * d_{1,1}^1 * d_{1,1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 2\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{436} &= |A_1|^2 [Re(T_{1,1,-1}^1)Re(T_{-1,1,1}^2) + Im(T_{1,1,-1}^1)Im(T_{-1,1,1}^2)] \\ \omega_{436} &= [(2*1+1)(2*2+1)d_{-1,0}^1 * d_{1,-2}^2 * d_{1,1}^1 * d_{-1,1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [1\phi_\ell + 0\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{437} &= |A_1|^2 [Re(T_{1,1,-1}^1)Re(T_{0,1,1}^2) + Im(T_{1,1,-1}^1)Im(T_{0,1,1}^2)] \\ \omega_{437} &= [(2*1+1)(2*2+1)d_{-1,0}^1 * d_{1,-1}^2 * d_{1,1}^1 * d_{0,1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [0\phi_\ell + 1\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{438} &= |A_1|^2 [Re(T_{1,1,-1}^1)Re(T_{1,1,1}^2) + Im(T_{1,1,-1}^1)Im(T_{1,1,1}^2)] \\ \omega_{438} &= [(2*1+1)(2*2+1)d_{-1,0}^1 * d_{1,0}^2 * d_{1,1}^1 * d_{1,1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 2\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{439} &= |A_1|^2 [Re(T_{-1,1,-1}^2)Re(T_{-1,1,-1}^2) + Im(T_{-1,1,-1}^2)Im(T_{-1,1,-1}^2)] \\ \omega_{439} &= 2[(2*2+1)(2*2+1)d_{-1,-2}^2 * d_{-1,-2}^2 * d_{-1,1}^1 * d_{-1,1}^1] \end{aligned}$$

$$\begin{aligned} A'_{440} &= |A_1|^2 [Re(T_{-1,1,-1}^2)Re(T_{0,1,-1}^2) + Im(T_{-1,1,-1}^2)Im(T_{0,1,-1}^2)] \\ \omega_{440} &= [(2*2+1)(2*2+1)d_{-1,-2}^2 * d_{-1,-1}^2 * d_{-1,1}^1 * d_{0,1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [0\phi_\ell + -1\phi_Z]) \end{aligned}$$

$$A'_{441} = |A_1|^2 [Re(T_{-1,1,-1}^2)Re(T_{1,1,-1}^2) + Im(T_{-1,1,-1}^2)Im(T_{1,1,-1}^2)] \\ \omega_{441} = [(2*2+1)(2*2+1)d_{-1,-2}^2 * d_{-1,0}^2 * d_{-1,1}^1 * d_{1,1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [-1\phi_\ell + 0\phi_Z])$$

$$A'_{442} = |A_1|^2 [Re(T_{-1,1,-1}^2)Re(T_{1,1,0}^0) + Im(T_{-1,1,-1}^2)Im(T_{1,1,0}^0)] \\ \omega_{442} = [(2*2+1)(2*0+1)d_{-1,-2}^2 * d_{0,0}^0 * d_{-1,1}^1 * d_{1,1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [-1\phi_\ell + 1\phi_Z])$$

$$A'_{443} = |A_1|^2 [Re(T_{-1,1,-1}^2)Re(T_{0,1,0}^1) + Im(T_{-1,1,-1}^2)Im(T_{0,1,0}^1)] \\ \omega_{443} = [(2*2+1)(2*1+1)d_{-1,-2}^2 * d_{0,-1}^1 * d_{-1,1}^1 * d_{0,1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [0\phi_\ell + 0\phi_Z])$$

$$A'_{444} = |A_1|^2 [Re(T_{-1,1,-1}^2)Re(T_{1,1,0}^1) + Im(T_{-1,1,-1}^2)Im(T_{1,1,0}^1)] \\ \omega_{444} = [(2*2+1)(2*1+1)d_{-1,-2}^2 * d_{0,0}^1 * d_{-1,1}^1 * d_{1,1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [-1\phi_\ell + 1\phi_Z])$$

$$A'_{445} = |A_1|^2 [Re(T_{-1,1,-1}^2)Re(T_{-1,1,0}^2) + Im(T_{-1,1,-1}^2)Im(T_{-1,1,0}^2)] \\ \omega_{445} = [(2*2+1)(2*2+1)d_{-1,-2}^2 * d_{0,-2}^2 * d_{-1,1}^1 * d_{-1,1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [1\phi_\ell + -1\phi_Z])$$

$$A'_{446} = |A_1|^2 [Re(T_{-1,1,-1}^2)Re(T_{0,1,0}^2) + Im(T_{-1,1,-1}^2)Im(T_{0,1,0}^2)] \\ \omega_{446} = [(2*2+1)(2*2+1)d_{-1,-2}^2 * d_{0,-1}^2 * d_{-1,1}^1 * d_{0,1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [0\phi_\ell + 0\phi_Z])$$

$$A'_{447} = |A_1|^2 [Re(T_{-1,1,-1}^2)Re(T_{1,1,0}^2) + Im(T_{-1,1,-1}^2)Im(T_{1,1,0}^2)] \\ \omega_{447} = [(2*2+1)(2*2+1)d_{-1,-2}^2 * d_{0,0}^2 * d_{-1,1}^1 * d_{1,1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [-1\phi_\ell + 1\phi_Z])$$

$$A'_{448} = |A_1|^2 [Re(T_{-1,1,-1}^2)Re(T_{0,1,1}^1) + Im(T_{-1,1,-1}^2)Im(T_{0,1,1}^1)] \\ \omega_{448} = [(2*2+1)(2*1+1)d_{-1,-2}^2 * d_{1,-1}^1 * d_{-1,1}^1 * d_{0,1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{449} = |A_1|^2 [Re(T_{-1,1,-1}^2)Re(T_{1,1,1}^1) + Im(T_{-1,1,-1}^2)Im(T_{1,1,1}^1)] \\ \omega_{449} = [(2*2+1)(2*1+1)d_{-1,-2}^2 * d_{1,0}^1 * d_{-1,1}^1 * d_{1,1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [-1\phi_\ell + 2\phi_Z])$$

$$A'_{450} = |A_1|^2 [Re(T_{-1,1,-1}^2)Re(T_{-1,1,1}^2) + Im(T_{-1,1,-1}^2)Im(T_{-1,1,1}^2)] \\ \omega_{450} = [(2*2+1)(2*2+1)d_{-1,-2}^2 * d_{1,-2}^2 * d_{-1,1}^1 * d_{-1,1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [1\phi_\ell + 0\phi_Z])$$

$$A'_{451} = |A_1|^2 [Re(T_{-1,1,-1}^2)Re(T_{0,1,1}^2) + Im(T_{-1,1,-1}^2)Im(T_{0,1,1}^2)] \\ \omega_{451} = [(2*2+1)(2*2+1)d_{-1,-2}^2 * d_{1,-1}^2 * d_{-1,1}^1 * d_{0,1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{452} = |A_1|^2 [Re(T_{-1,1,-1}^2)Re(T_{1,1,1}^2) + Im(T_{-1,1,-1}^2)Im(T_{1,1,1}^2)] \\ \omega_{452} = [(2*2+1)(2*2+1)d_{-1,-2}^2 * d_{1,0}^2 * d_{-1,1}^1 * d_{1,1}^1] * \cos([1\phi_\ell + -2\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$[-1\phi_\ell + 2\phi_Z])$$

$$\begin{aligned} A'_{453} &= |A_1|^2 [Re(T_{0,1,-1}^2)Re(T_{0,1,-1}^2) + Im(T_{0,1,-1}^2)Im(T_{0,1,-1}^2)] \\ \omega_{453} &= 2[(2*2+1)(2*2+1)d_{-1,-1}^2 * d_{-1,-1}^2 * d_{0,1}^1 * d_{0,1}^1] \end{aligned}$$

$$\begin{aligned} A'_{454} &= |A_1|^2 [Re(T_{0,1,-1}^2)Re(T_{1,1,-1}^2) + Im(T_{0,1,-1}^2)Im(T_{1,1,-1}^2)] \\ \omega_{454} &= [(2*2+1)(2*2+1)d_{-1,-1}^2 * d_{-1,0}^2 * d_{0,1}^1 * d_{1,1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [-1\phi_\ell + 0\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{455} &= |A_1|^2 [Re(T_{0,1,-1}^2)Re(T_{1,1,0}^0) + Im(T_{0,1,-1}^2)Im(T_{1,1,0}^0)] \\ \omega_{455} &= [(2*2+1)(2*0+1)d_{-1,-1}^2 * d_{0,0}^0 * d_{0,1}^1 * d_{1,1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [-1\phi_\ell + 1\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{456} &= |A_1|^2 [Re(T_{0,1,-1}^2)Re(T_{0,1,0}^1) + Im(T_{0,1,-1}^2)Im(T_{0,1,0}^1)] \\ \omega_{456} &= [(2*2+1)(2*1+1)d_{-1,-1}^2 * d_{0,-1}^1 * d_{0,1}^1 * d_{0,1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [0\phi_\ell + 0\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{457} &= |A_1|^2 [Re(T_{0,1,-1}^2)Re(T_{1,1,0}^1) + Im(T_{0,1,-1}^2)Im(T_{1,1,0}^1)] \\ \omega_{457} &= [(2*2+1)(2*1+1)d_{-1,-1}^2 * d_{0,0}^1 * d_{0,1}^1 * d_{1,1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [-1\phi_\ell + 1\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{458} &= |A_1|^2 [Re(T_{0,1,-1}^2)Re(T_{-1,1,0}^2) + Im(T_{0,1,-1}^2)Im(T_{-1,1,0}^2)] \\ \omega_{458} &= [(2*2+1)(2*2+1)d_{-1,-1}^2 * d_{0,-2}^2 * d_{0,1}^1 * d_{-1,1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [1\phi_\ell + -1\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{459} &= |A_1|^2 [Re(T_{0,1,-1}^2)Re(T_{0,1,0}^2) + Im(T_{0,1,-1}^2)Im(T_{0,1,0}^2)] \\ \omega_{459} &= [(2*2+1)(2*2+1)d_{-1,-1}^2 * d_{0,-1}^2 * d_{0,1}^1 * d_{0,1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [0\phi_\ell + 0\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{460} &= |A_1|^2 [Re(T_{0,1,-1}^2)Re(T_{1,1,0}^2) + Im(T_{0,1,-1}^2)Im(T_{1,1,0}^2)] \\ \omega_{460} &= [(2*2+1)(2*2+1)d_{-1,-1}^2 * d_{0,0}^2 * d_{0,1}^1 * d_{1,1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [-1\phi_\ell + 1\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{461} &= |A_1|^2 [Re(T_{0,1,-1}^2)Re(T_{0,1,1}^1) + Im(T_{0,1,-1}^2)Im(T_{0,1,1}^1)] \\ \omega_{461} &= [(2*2+1)(2*1+1)d_{-1,-1}^2 * d_{1,-1}^1 * d_{0,1}^1 * d_{0,1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [0\phi_\ell + 1\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{462} &= |A_1|^2 [Re(T_{0,1,-1}^2)Re(T_{1,1,1}^1) + Im(T_{0,1,-1}^2)Im(T_{1,1,1}^1)] \\ \omega_{462} &= [(2*2+1)(2*1+1)d_{-1,-1}^2 * d_{1,0}^1 * d_{0,1}^1 * d_{1,1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [-1\phi_\ell + 2\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{463} &= |A_1|^2 [Re(T_{0,1,-1}^2)Re(T_{-1,1,1}^2) + Im(T_{0,1,-1}^2)Im(T_{-1,1,1}^2)] \\ \omega_{463} &= [(2*2+1)(2*2+1)d_{-1,-1}^2 * d_{1,-2}^2 * d_{0,1}^1 * d_{-1,1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [1\phi_\ell + 0\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{464} &= |A_1|^2 [Re(T_{0,1,-1}^2)Re(T_{0,1,1}^2) + Im(T_{0,1,-1}^2)Im(T_{0,1,1}^2)] \\ \omega_{464} &= [(2*2+1)(2*2+1)d_{-1,-1}^2 * d_{1,-1}^2 * d_{0,1}^1 * d_{0,1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [0\phi_\ell + 1\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{465} &= |A_1|^2 [Re(T_{0,1,-1}^2)Re(T_{1,1,1}^2) + Im(T_{0,1,-1}^2)Im(T_{1,1,1}^2)] \\ \omega_{465} &= [(2*2+1)(2*2+1)d_{-1,-1}^2 * d_{1,0}^2 * d_{0,1}^1 * d_{1,1}^1] * \cos([0\phi_\ell + -1\phi_Z] - [-1\phi_\ell + 2\phi_Z]) \end{aligned}$$

$$\begin{aligned} A'_{466} &= |A_1|^2 [Re(T_{1,1,-1}^2)Re(T_{1,1,-1}^2) + Im(T_{1,1,-1}^2)Im(T_{1,1,-1}^2)] \\ \omega_{466} &= 2[(2*2+1)(2*2+1)d_{-1,0}^2 * d_{-1,0}^2 * d_{1,1}^1 * d_{1,1}^1] \end{aligned}$$

$$A'_{467} = |A_1|^2 [Re(T_{1,1,-1}^2)Re(T_{1,1,0}^0) + Im(T_{1,1,-1}^2)Im(T_{1,1,0}^0)] \\ \omega_{467} = [(2*2+1)(2*0+1)d_{-1,0}^2 * d_{0,0}^0 * d_{1,1}^1 * d_{1,1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 1\phi_Z])$$

$$A'_{468} = |A_1|^2 [Re(T_{1,1,-1}^2)Re(T_{0,1,0}^1) + Im(T_{1,1,-1}^2)Im(T_{0,1,0}^1)] \\ \omega_{468} = [(2*2+1)(2*1+1)d_{-1,0}^2 * d_{0,-1}^1 * d_{1,1}^1 * d_{0,1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [0\phi_\ell + 0\phi_Z])$$

$$A'_{469} = |A_1|^2 [Re(T_{1,1,-1}^2)Re(T_{1,1,0}^1) + Im(T_{1,1,-1}^2)Im(T_{1,1,0}^1)] \\ \omega_{469} = [(2*2+1)(2*1+1)d_{-1,0}^2 * d_{0,0}^1 * d_{1,1}^1 * d_{1,1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 1\phi_Z])$$

$$A'_{470} = |A_1|^2 [Re(T_{1,1,-1}^2)Re(T_{-1,1,0}^2) + Im(T_{1,1,-1}^2)Im(T_{-1,1,0}^2)] \\ \omega_{470} = [(2*2+1)(2*2+1)d_{-1,0}^2 * d_{0,-2}^2 * d_{1,1}^1 * d_{-1,1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [1\phi_\ell + -1\phi_Z])$$

$$A'_{471} = |A_1|^2 [Re(T_{1,1,-1}^2)Re(T_{0,1,0}^2) + Im(T_{1,1,-1}^2)Im(T_{0,1,0}^2)] \\ \omega_{471} = [(2*2+1)(2*2+1)d_{-1,0}^2 * d_{0,-1}^2 * d_{1,1}^1 * d_{0,1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [0\phi_\ell + 0\phi_Z])$$

$$A'_{472} = |A_1|^2 [Re(T_{1,1,-1}^2)Re(T_{1,1,0}^2) + Im(T_{1,1,-1}^2)Im(T_{1,1,0}^2)] \\ \omega_{472} = [(2*2+1)(2*2+1)d_{-1,0}^2 * d_{0,0}^2 * d_{1,1}^1 * d_{1,1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 1\phi_Z])$$

$$A'_{473} = |A_1|^2 [Re(T_{1,1,-1}^2)Re(T_{0,1,1}^1) + Im(T_{1,1,-1}^2)Im(T_{0,1,1}^1)] \\ \omega_{473} = [(2*2+1)(2*1+1)d_{-1,0}^2 * d_{1,-1}^1 * d_{1,1}^1 * d_{0,1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{474} = |A_1|^2 [Re(T_{1,1,-1}^2)Re(T_{1,1,1}^1) + Im(T_{1,1,-1}^2)Im(T_{1,1,1}^1)] \\ \omega_{474} = [(2*2+1)(2*1+1)d_{-1,0}^2 * d_{1,0}^1 * d_{1,1}^1 * d_{1,1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 2\phi_Z])$$

$$A'_{475} = |A_1|^2 [Re(T_{1,1,-1}^2)Re(T_{-1,1,1}^2) + Im(T_{1,1,-1}^2)Im(T_{-1,1,1}^2)] \\ \omega_{475} = [(2*2+1)(2*2+1)d_{-1,0}^2 * d_{1,-2}^2 * d_{1,1}^1 * d_{-1,1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [1\phi_\ell + 0\phi_Z])$$

$$A'_{476} = |A_1|^2 [Re(T_{1,1,-1}^2)Re(T_{0,1,1}^2) + Im(T_{1,1,-1}^2)Im(T_{0,1,1}^2)] \\ \omega_{476} = [(2*2+1)(2*2+1)d_{-1,0}^2 * d_{1,-1}^2 * d_{1,1}^1 * d_{0,1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{477} = |A_1|^2 [Re(T_{1,1,-1}^2)Re(T_{1,1,1}^2) + Im(T_{1,1,-1}^2)Im(T_{1,1,1}^2)] \\ \omega_{477} = [(2*2+1)(2*2+1)d_{-1,0}^2 * d_{1,0}^2 * d_{1,1}^1 * d_{1,1}^1] * \cos([-1\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 2\phi_Z])$$

$$A'_{478} = |A_1|^2 [Re(T_{1,1,0}^0)Re(T_{1,1,0}^0) + Im(T_{1,1,0}^0)Im(T_{1,1,0}^0)] \\ \omega_{478} = 2[(2*0+1)(2*0+1)d_{0,0}^0 * d_{0,0}^0 * d_{1,1}^1 * d_{1,1}^1]$$

$$A'_{479} = |A_1|^2 [Re(T_{1,1,0}^0)Re(T_{0,1,0}^1) + Im(T_{1,1,0}^0)Im(T_{0,1,0}^1)] \\ \omega_{479} = [(2*0+1)(2*1+1)d_{0,0}^0 * d_{0,-1}^1 * d_{1,1}^1 * d_{0,1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [0\phi_\ell + 0\phi_Z])$$

$$A'_{480} = |A_1|^2 [Re(T_{1,1,0}^0)Re(T_{1,1,0}^1) + Im(T_{1,1,0}^0)Im(T_{1,1,0}^1)] \\ \omega_{480} = [(2*0+1)(2*1+1)d_{0,0}^0 * d_{0,0}^1 * d_{1,1}^1 * d_{1,1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [-1\phi_\ell + 1\phi_Z])$$

$$A'_{481} = |A_1|^2 [Re(T_{1,1,0}^0)Re(T_{-1,1,0}^2) + Im(T_{1,1,0}^0)Im(T_{-1,1,0}^2)] \\ \omega_{481} = [(2*0+1)(2*2+1)d_{0,0}^0 * d_{0,-2}^2 * d_{1,1}^1 * d_{-1,1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [1\phi_\ell + -1\phi_Z])$$

$$\begin{aligned}
A'_{482} &= |A_1|^2 [Re(T_{1,1,0}^0)Re(T_{0,1,0}^2) + Im(T_{1,1,0}^0)Im(T_{0,1,0}^2)] \\
\omega_{482} &= [(2*0+1)(2*2+1)d_{0,0}^0 * d_{0,-1}^2 * d_{1,1}^1 * d_{0,1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [0\phi_\ell + 0\phi_Z]) \\
A'_{483} &= |A_1|^2 [Re(T_{1,1,0}^0)Re(T_{1,1,0}^2) + Im(T_{1,1,0}^0)Im(T_{1,1,0}^2)] \\
\omega_{483} &= [(2*0+1)(2*2+1)d_{0,0}^0 * d_{0,0}^2 * d_{1,1}^1 * d_{1,1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [-1\phi_\ell + 1\phi_Z]) \\
A'_{484} &= |A_1|^2 [Re(T_{1,1,0}^0)Re(T_{0,1,1}^1) + Im(T_{1,1,0}^0)Im(T_{0,1,1}^1)] \\
\omega_{484} &= [(2*0+1)(2*1+1)d_{0,0}^0 * d_{1,-1}^1 * d_{1,1}^1 * d_{0,1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [0\phi_\ell + 1\phi_Z]) \\
A'_{485} &= |A_1|^2 [Re(T_{1,1,0}^0)Re(T_{1,1,1}^1) + Im(T_{1,1,0}^0)Im(T_{1,1,1}^1)] \\
\omega_{485} &= [(2*0+1)(2*1+1)d_{0,0}^0 * d_{1,0}^1 * d_{1,1}^1 * d_{1,1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [-1\phi_\ell + 2\phi_Z]) \\
A'_{486} &= |A_1|^2 [Re(T_{1,1,0}^0)Re(T_{-1,1,1}^2) + Im(T_{1,1,0}^0)Im(T_{-1,1,1}^2)] \\
\omega_{486} &= [(2*0+1)(2*2+1)d_{0,0}^0 * d_{1,-2}^2 * d_{1,1}^1 * d_{-1,1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [1\phi_\ell + 0\phi_Z]) \\
A'_{487} &= |A_1|^2 [Re(T_{1,1,0}^0)Re(T_{0,1,1}^2) + Im(T_{1,1,0}^0)Im(T_{0,1,1}^2)] \\
\omega_{487} &= [(2*0+1)(2*2+1)d_{0,0}^0 * d_{1,-1}^2 * d_{1,1}^1 * d_{0,1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [0\phi_\ell + 1\phi_Z]) \\
A'_{488} &= |A_1|^2 [Re(T_{1,1,0}^0)Re(T_{1,1,1}^2) + Im(T_{1,1,0}^0)Im(T_{1,1,1}^2)] \\
\omega_{488} &= [(2*0+1)(2*2+1)d_{0,0}^0 * d_{1,0}^2 * d_{1,1}^1 * d_{1,1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [-1\phi_\ell + 2\phi_Z]) \\
A'_{489} &= |A_1|^2 [Re(T_{0,1,0}^1)Re(T_{0,1,0}^1) + Im(T_{0,1,0}^1)Im(T_{0,1,0}^1)] \\
\omega_{489} &= 2[(2*1+1)(2*1+1)d_{0,-1}^1 * d_{0,0}^1 * d_{0,1}^1 * d_{0,1}^1] \\
A'_{490} &= |A_1|^2 [Re(T_{0,1,0}^1)Re(T_{1,1,0}^1) + Im(T_{0,1,0}^1)Im(T_{1,1,0}^1)] \\
\omega_{490} &= [(2*1+1)(2*1+1)d_{0,-1}^1 * d_{0,0}^1 * d_{0,1}^1 * d_{1,1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 1\phi_Z]) \\
A'_{491} &= |A_1|^2 [Re(T_{0,1,0}^1)Re(T_{-1,1,0}^2) + Im(T_{0,1,0}^1)Im(T_{-1,1,0}^2)] \\
\omega_{491} &= [(2*1+1)(2*2+1)d_{0,-1}^1 * d_{0,-2}^2 * d_{0,1}^1 * d_{-1,1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [1\phi_\ell + -1\phi_Z]) \\
A'_{492} &= |A_1|^2 [Re(T_{0,1,0}^1)Re(T_{0,1,0}^2) + Im(T_{0,1,0}^1)Im(T_{0,1,0}^2)] \\
\omega_{492} &= [(2*1+1)(2*2+1)d_{0,-1}^1 * d_{0,-1}^2 * d_{0,1}^1 * d_{0,1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [0\phi_\ell + 0\phi_Z]) \\
A'_{493} &= |A_1|^2 [Re(T_{0,1,0}^1)Re(T_{1,1,0}^2) + Im(T_{0,1,0}^1)Im(T_{1,1,0}^2)] \\
\omega_{493} &= [(2*1+1)(2*2+1)d_{0,-1}^1 * d_{0,0}^2 * d_{0,1}^1 * d_{1,1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 1\phi_Z]) \\
A'_{494} &= |A_1|^2 [Re(T_{0,1,0}^1)Re(T_{0,1,1}^1) + Im(T_{0,1,0}^1)Im(T_{0,1,1}^1)] \\
\omega_{494} &= [(2*1+1)(2*1+1)d_{0,-1}^1 * d_{1,-1}^1 * d_{0,1}^1 * d_{0,1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [0\phi_\ell + 1\phi_Z]) \\
A'_{495} &= |A_1|^2 [Re(T_{0,1,0}^1)Re(T_{1,1,1}^1) + Im(T_{0,1,0}^1)Im(T_{1,1,1}^1)] \\
\omega_{495} &= [(2*1+1)(2*1+1)d_{0,-1}^1 * d_{1,0}^1 * d_{0,1}^1 * d_{1,1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 2\phi_Z]) \\
A'_{496} &= |A_1|^2 [Re(T_{0,1,0}^1)Re(T_{-1,1,1}^2) + Im(T_{0,1,0}^1)Im(T_{-1,1,1}^2)] \\
\omega_{496} &= [(2*1+1)(2*2+1)d_{0,-1}^1 * d_{1,-2}^2 * d_{0,1}^1 * d_{-1,1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [1\phi_\ell + 0\phi_Z])
\end{aligned}$$

$$A'_{497} = |A_1|^2 [Re(T^1_{0,1,0})Re(T^2_{0,1,1}) + Im(T^1_{0,1,0})Im(T^2_{0,1,1})] \\ \omega_{497} = [(2*1+1)(2*2+1)d^1_{0,-1}*d^2_{1,-1}*d^1_{0,1}*d^1_{0,1}]*\cos([0\phi_\ell+0\phi_Z]-[0\phi_\ell+1\phi_Z])$$

$$A'_{498} = |A_1|^2 [Re(T^1_{0,1,0})Re(T^2_{1,1,1}) + Im(T^1_{0,1,0})Im(T^2_{1,1,1})] \\ \omega_{498} = [(2*1+1)(2*2+1)d^1_{0,-1}*d^2_{1,0}*d^1_{0,1}*d^1_{1,1}]*\cos([0\phi_\ell+0\phi_Z]-[-1\phi_\ell+2\phi_Z])$$

$$A'_{499} = |A_1|^2 [Re(T^1_{1,1,0})Re(T^1_{1,1,0}) + Im(T^1_{1,1,0})Im(T^1_{1,1,0})] \\ \omega_{499} = 2[(2*1+1)(2*1+1)d^1_{0,0}*d^1_{0,0}*d^1_{1,1}*d^1_{1,1}]$$

$$A'_{500} = |A_1|^2 [Re(T^1_{1,1,0})Re(T^2_{-1,1,0}) + Im(T^1_{1,1,0})Im(T^2_{-1,1,0})] \\ \omega_{500} = [(2*1+1)(2*2+1)d^1_{0,0}*d^2_{0,-2}*d^1_{1,1}*d^1_{-1,1}]*\cos([-1\phi_\ell+1\phi_Z]-[1\phi_\ell+-1\phi_Z])$$

$$A'_{501} = |A_1|^2 [Re(T^1_{1,1,0})Re(T^2_{0,1,0}) + Im(T^1_{1,1,0})Im(T^2_{0,1,0})] \\ \omega_{501} = [(2*1+1)(2*2+1)d^1_{0,0}*d^2_{0,-1}*d^1_{1,1}*d^1_{0,1}]*\cos([-1\phi_\ell+1\phi_Z]-[0\phi_\ell+0\phi_Z])$$

$$A'_{502} = |A_1|^2 [Re(T^1_{1,1,0})Re(T^2_{1,1,0}) + Im(T^1_{1,1,0})Im(T^2_{1,1,0})] \\ \omega_{502} = [(2*1+1)(2*2+1)d^1_{0,0}*d^2_{0,0}*d^1_{1,1}*d^1_{1,1}]*\cos([-1\phi_\ell+1\phi_Z]-[-1\phi_\ell+1\phi_Z])$$

$$A'_{503} = |A_1|^2 [Re(T^1_{1,1,0})Re(T^1_{0,1,1}) + Im(T^1_{1,1,0})Im(T^1_{0,1,1})] \\ \omega_{503} = [(2*1+1)(2*1+1)d^1_{0,0}*d^1_{1,-1}*d^1_{1,1}*d^1_{0,1}]*\cos([-1\phi_\ell+1\phi_Z]-[0\phi_\ell+1\phi_Z])$$

$$A'_{504} = |A_1|^2 [Re(T^1_{1,1,0})Re(T^1_{1,1,1}) + Im(T^1_{1,1,0})Im(T^1_{1,1,1})] \\ \omega_{504} = [(2*1+1)(2*1+1)d^1_{0,0}*d^1_{1,0}*d^1_{1,1}*d^1_{1,1}]*\cos([-1\phi_\ell+1\phi_Z]-[-1\phi_\ell+2\phi_Z])$$

$$A'_{505} = |A_1|^2 [Re(T^1_{1,1,0})Re(T^2_{-1,1,1}) + Im(T^1_{1,1,0})Im(T^2_{-1,1,1})] \\ \omega_{505} = [(2*1+1)(2*2+1)d^1_{0,0}*d^2_{1,-2}*d^1_{1,1}*d^1_{-1,1}]*\cos([-1\phi_\ell+1\phi_Z]-[1\phi_\ell+0\phi_Z])$$

$$A'_{506} = |A_1|^2 [Re(T^1_{1,1,0})Re(T^2_{0,1,1}) + Im(T^1_{1,1,0})Im(T^2_{0,1,1})] \\ \omega_{506} = [(2*1+1)(2*2+1)d^1_{0,0}*d^2_{1,-1}*d^1_{1,1}*d^1_{0,1}]*\cos([-1\phi_\ell+1\phi_Z]-[0\phi_\ell+1\phi_Z])$$

$$A'_{507} = |A_1|^2 [Re(T^1_{1,1,0})Re(T^2_{1,1,1}) + Im(T^1_{1,1,0})Im(T^2_{1,1,1})] \\ \omega_{507} = [(2*1+1)(2*2+1)d^1_{0,0}*d^2_{1,0}*d^1_{1,1}*d^1_{1,1}]*\cos([-1\phi_\ell+1\phi_Z]-[-1\phi_\ell+2\phi_Z])$$

$$A'_{508} = |A_1|^2 [Re(T^2_{-1,1,0})Re(T^2_{-1,1,0}) + Im(T^2_{-1,1,0})Im(T^2_{-1,1,0})] \\ \omega_{508} = 2[(2*2+1)(2*2+1)d^2_{0,-2}*d^2_{0,-1}*d^1_{-1,1}*d^1_{0,1}]*\cos([1\phi_\ell+-1\phi_Z]-[0\phi_\ell+0\phi_Z])$$

$$A'_{509} = |A_1|^2 [Re(T^2_{-1,1,0})Re(T^2_{0,1,0}) + Im(T^2_{-1,1,0})Im(T^2_{0,1,0})] \\ \omega_{509} = [(2*2+1)(2*2+1)d^2_{0,-2}*d^2_{0,-1}*d^1_{-1,1}*d^1_{0,1}]*\cos([1\phi_\ell+-1\phi_Z]-[0\phi_\ell+0\phi_Z])$$

$$A'_{510} = |A_1|^2 [Re(T^2_{-1,1,0})Re(T^2_{1,1,0}) + Im(T^2_{-1,1,0})Im(T^2_{1,1,0})] \\ \omega_{510} = [(2*2+1)(2*2+1)d^2_{0,-2}*d^2_{0,0}*d^1_{-1,1}*d^1_{1,1}]*\cos([1\phi_\ell+-1\phi_Z]-[-1\phi_\ell+1\phi_Z])$$

$$A'_{511} = |A_1|^2 [Re(T^2_{-1,1,0})Re(T^1_{0,1,1}) + Im(T^2_{-1,1,0})Im(T^1_{0,1,1})] \\ \omega_{511} = [(2*2+1)(2*1+1)d^2_{0,-2}*d^1_{1,-1}*d^1_{-1,1}*d^1_{0,1}]*\cos([1\phi_\ell+-1\phi_Z]-[0\phi_\ell+1\phi_Z])$$

$$A'_{512} = |A_1|^2 [Re(T^2_{-1,1,0})Re(T^1_{1,1,1}) + Im(T^2_{-1,1,0})Im(T^1_{1,1,1})]$$

$$\omega_{512} = [(2*2+1)(2*1+1)d_{0,-2}^2 * d_{1,0}^1 * d_{-1,1}^1 * d_{1,1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [-1\phi_\ell + 2\phi_Z])$$

$$A'_{513} = |A_1|^2 [Re(T_{-1,1,0}^2)Re(T_{-1,1,1}^2) + Im(T_{-1,1,0}^2)Im(T_{-1,1,1}^2)] \\ \omega_{513} = [(2*2+1)(2*2+1)d_{0,-2}^2 * d_{1,-2}^2 * d_{-1,1}^1 * d_{1,1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [1\phi_\ell + 0\phi_Z])$$

$$A'_{514} = |A_1|^2 [Re(T_{-1,1,0}^2)Re(T_{0,1,1}^2) + Im(T_{-1,1,0}^2)Im(T_{0,1,1}^2)] \\ \omega_{514} = [(2*2+1)(2*2+1)d_{0,-2}^2 * d_{1,-1}^2 * d_{-1,1}^1 * d_{0,1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{515} = |A_1|^2 [Re(T_{-1,1,0}^2)Re(T_{1,1,1}^2) + Im(T_{-1,1,0}^2)Im(T_{1,1,1}^2)] \\ \omega_{515} = [(2*2+1)(2*2+1)d_{0,-2}^2 * d_{1,0}^2 * d_{-1,1}^1 * d_{1,1}^1] * \cos([1\phi_\ell + -1\phi_Z] - [-1\phi_\ell + 2\phi_Z])$$

$$A'_{516} = |A_1|^2 [Re(T_{0,1,0}^2)Re(T_{0,1,0}^2) + Im(T_{0,1,0}^2)Im(T_{0,1,0}^2)] \\ \omega_{516} = [(2*2+1)(2*2+1)d_{0,-1}^2 * d_{0,0}^2 * d_{0,1}^1 * d_{0,1}^1]$$

$$A'_{517} = |A_1|^2 [Re(T_{0,1,0}^2)Re(T_{1,1,0}^2) + Im(T_{0,1,0}^2)Im(T_{1,1,0}^2)] \\ \omega_{517} = [(2*2+1)(2*2+1)d_{0,-1}^2 * d_{0,0}^1 * d_{0,1}^1 * d_{1,1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 1\phi_Z])$$

$$A'_{518} = |A_1|^2 [Re(T_{0,1,0}^2)Re(T_{0,1,1}^1) + Im(T_{0,1,0}^2)Im(T_{0,1,1}^1)] \\ \omega_{518} = [(2*2+1)(2*1+1)d_{0,-1}^2 * d_{1,-1}^1 * d_{0,1}^1 * d_{0,1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{519} = |A_1|^2 [Re(T_{0,1,0}^2)Re(T_{1,1,1}^1) + Im(T_{0,1,0}^2)Im(T_{1,1,1}^1)] \\ \omega_{519} = [(2*2+1)(2*1+1)d_{0,-1}^2 * d_{1,0}^1 * d_{0,1}^1 * d_{1,1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 2\phi_Z])$$

$$A'_{520} = |A_1|^2 [Re(T_{0,1,0}^2)Re(T_{-1,1,1}^2) + Im(T_{0,1,0}^2)Im(T_{-1,1,1}^2)] \\ \omega_{520} = [(2*2+1)(2*2+1)d_{0,-1}^2 * d_{1,-2}^2 * d_{0,1}^1 * d_{-1,1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [1\phi_\ell + 0\phi_Z])$$

$$A'_{521} = |A_1|^2 [Re(T_{0,1,0}^2)Re(T_{0,1,1}^2) + Im(T_{0,1,0}^2)Im(T_{0,1,1}^2)] \\ \omega_{521} = [(2*2+1)(2*2+1)d_{0,-1}^2 * d_{1,-1}^2 * d_{0,1}^1 * d_{0,1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{522} = |A_1|^2 [Re(T_{0,1,0}^2)Re(T_{1,1,1}^2) + Im(T_{0,1,0}^2)Im(T_{1,1,1}^2)] \\ \omega_{522} = [(2*2+1)(2*2+1)d_{0,-1}^2 * d_{1,0}^2 * d_{0,1}^1 * d_{1,1}^1] * \cos([0\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 2\phi_Z])$$

$$A'_{523} = |A_1|^2 [Re(T_{1,1,0}^2)Re(T_{1,1,0}^2) + Im(T_{1,1,0}^2)Im(T_{1,1,0}^2)] \\ \omega_{523} = [(2*2+1)(2*2+1)d_{0,0}^2 * d_{0,0}^2 * d_{1,1}^1 * d_{1,1}^1]$$

$$A'_{524} = |A_1|^2 [Re(T_{1,1,0}^2)Re(T_{0,1,1}^1) + Im(T_{1,1,0}^2)Im(T_{0,1,1}^1)] \\ \omega_{524} = [(2*2+1)(2*1+1)d_{0,0}^2 * d_{1,-1}^1 * d_{1,1}^1 * d_{0,1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{525} = |A_1|^2 [Re(T_{1,1,0}^2)Re(T_{1,1,1}^1) + Im(T_{1,1,0}^2)Im(T_{1,1,1}^1)] \\ \omega_{525} = [(2*2+1)(2*1+1)d_{0,0}^2 * d_{1,0}^1 * d_{1,1}^1 * d_{1,1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [-1\phi_\ell + 2\phi_Z])$$

$$A'_{526} = |A_1|^2 [Re(T_{1,1,0}^2)Re(T_{-1,1,1}^2) + Im(T_{1,1,0}^2)Im(T_{-1,1,1}^2)] \\ \omega_{526} = [(2*2+1)(2*2+1)d_{0,0}^2 * d_{1,-2}^2 * d_{1,1}^1 * d_{-1,1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [1\phi_\ell + 0\phi_Z])$$

$$A'_{527} = |A_1|^2 [Re(T_{1,1,0}^2)Re(T_{0,1,1}^2) + Im(T_{1,1,0}^2)Im(T_{0,1,1}^2)]$$

$$\omega_{527} = [(2*2+1)(2*2+1)d_{0,0}^2 * d_{1,-1}^2 * d_{1,1}^1 * d_{0,1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{528} = |A_1|^2 [Re(T_{1,1,0}^2)Re(T_{1,1,1}^2) + Im(T_{1,1,0}^2)Im(T_{1,1,1}^2)] \\ \omega_{528} = [(2*2+1)(2*2+1)d_{0,0}^2 * d_{1,0}^2 * d_{1,1}^1 * d_{1,1}^1] * \cos([-1\phi_\ell + 1\phi_Z] - [-1\phi_\ell + 2\phi_Z])$$

$$A'_{529} = |A_1|^2 [Re(T_{0,1,1}^1)Re(T_{0,1,1}^1) + Im(T_{0,1,1}^1)Im(T_{0,1,1}^1)] \\ \omega_{529} = 2[(2*1+1)(2*1+1)d_{1,-1}^1 * d_{1,-1}^1 * d_{0,1}^1 * d_{0,1}^1]$$

$$A'_{530} = |A_1|^2 [Re(T_{0,1,1}^1)Re(T_{1,1,1}^1) + Im(T_{0,1,1}^1)Im(T_{1,1,1}^1)] \\ \omega_{530} = [(2*1+1)(2*1+1)d_{1,-1}^1 * d_{1,0}^1 * d_{0,1}^1 * d_{1,1}^1] * \cos([0\phi_\ell + 1\phi_Z] - [-1\phi_\ell + 2\phi_Z])$$

$$A'_{531} = |A_1|^2 [Re(T_{0,1,1}^1)Re(T_{-1,1,1}^2) + Im(T_{0,1,1}^1)Im(T_{-1,1,1}^2)] \\ \omega_{531} = [(2*1+1)(2*2+1)d_{1,-1}^1 * d_{1,-2}^2 * d_{0,1}^1 * d_{-1,1}^1] * \cos([0\phi_\ell + 1\phi_Z] - [1\phi_\ell + 0\phi_Z])$$

$$A'_{532} = |A_1|^2 [Re(T_{0,1,1}^1)Re(T_{0,1,1}^2) + Im(T_{0,1,1}^1)Im(T_{0,1,1}^2)] \\ \omega_{532} = [(2*1+1)(2*2+1)d_{1,-1}^1 * d_{1,-2}^2 * d_{0,1}^1 * d_{0,1}^1] * \cos([0\phi_\ell + 1\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{533} = |A_1|^2 [Re(T_{0,1,1}^1)Re(T_{1,1,1}^2) + Im(T_{0,1,1}^1)Im(T_{1,1,1}^2)] \\ \omega_{533} = [(2*1+1)(2*2+1)d_{1,-1}^1 * d_{1,0}^2 * d_{0,1}^1 * d_{1,1}^1] * \cos([0\phi_\ell + 1\phi_Z] - [-1\phi_\ell + 2\phi_Z])$$

$$A'_{534} = |A_1|^2 [Re(T_{1,1,1}^1)Re(T_{1,1,1}^1) + Im(T_{1,1,1}^1)Im(T_{1,1,1}^1)] \\ \omega_{534} = 2[(2*1+1)(2*1+1)d_{1,0}^1 * d_{1,0}^1 * d_{1,1}^1 * d_{1,1}^1]$$

$$A'_{535} = |A_1|^2 [Re(T_{1,1,1}^1)Re(T_{-1,1,1}^2) + Im(T_{1,1,1}^1)Im(T_{-1,1,1}^2)] \\ \omega_{535} = [(2*1+1)(2*2+1)d_{1,0}^1 * d_{1,-2}^2 * d_{1,1}^1 * d_{-1,1}^1] * \cos([-1\phi_\ell + 2\phi_Z] - [1\phi_\ell + 0\phi_Z])$$

$$A'_{536} = |A_1|^2 [Re(T_{1,1,1}^1)Re(T_{0,1,1}^2) + Im(T_{1,1,1}^1)Im(T_{0,1,1}^2)] \\ \omega_{536} = [(2*1+1)(2*2+1)d_{1,0}^1 * d_{1,-1}^2 * d_{1,1}^1 * d_{0,1}^1] * \cos([-1\phi_\ell + 2\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{537} = |A_1|^2 [Re(T_{1,1,1}^1)Re(T_{1,1,1}^2) + Im(T_{1,1,1}^1)Im(T_{1,1,1}^2)] \\ \omega_{537} = [(2*1+1)(2*2+1)d_{1,0}^1 * d_{1,0}^2 * d_{1,1}^1 * d_{1,1}^1] * \cos([-1\phi_\ell + 2\phi_Z] - [-1\phi_\ell + 2\phi_Z])$$

$$A'_{538} = |A_1|^2 [Re(T_{-1,1,1}^2)Re(T_{-1,1,1}^2) + Im(T_{-1,1,1}^2)Im(T_{-1,1,1}^2)] \\ \omega_{538} = 2[(2*2+1)(2*2+1)d_{1,-2}^2 * d_{1,-2}^2 * d_{-1,1}^1 * d_{-1,1}^1]$$

$$A'_{539} = |A_1|^2 [Re(T_{-1,1,1}^2)Re(T_{0,1,1}^2) + Im(T_{-1,1,1}^2)Im(T_{0,1,1}^2)] \\ \omega_{539} = [(2*2+1)(2*2+1)d_{1,-2}^2 * d_{1,-1}^2 * d_{-1,1}^1 * d_{0,1}^1] * \cos([1\phi_\ell + 0\phi_Z] - [0\phi_\ell + 1\phi_Z])$$

$$A'_{540} = |A_1|^2 [Re(T_{-1,1,1}^2)Re(T_{1,1,1}^2) + Im(T_{-1,1,1}^2)Im(T_{1,1,1}^2)] \\ \omega_{540} = [(2*2+1)(2*2+1)d_{1,-2}^2 * d_{1,0}^2 * d_{-1,1}^1 * d_{1,1}^1] * \cos([1\phi_\ell + 0\phi_Z] - [-1\phi_\ell + 2\phi_Z])$$

$$A'_{541} = |A_1|^2 [Re(T_{0,1,1}^2)Re(T_{0,1,1}^2) + Im(T_{0,1,1}^2)Im(T_{0,1,1}^2)] \\ \omega_{541} = 2[(2*2+1)(2*2+1)d_{1,-1}^2 * d_{1,-1}^2 * d_{0,1}^1 * d_{0,1}^1]$$

$$A'_{542} = |A_1|^2 [Re(T_{0,1,1}^2)Re(T_{1,1,1}^2) + Im(T_{0,1,1}^2)Im(T_{1,1,1}^2)] \\ \omega_{542} = [(2*2+1)(2*2+1)d_{1,-1}^2 * d_{1,0}^2 * d_{0,1}^1 * d_{1,1}^1] * \cos([0\phi_\ell + 1\phi_Z] - [-1\phi_\ell + 2\phi_Z])$$

$$\begin{aligned}A'_{543} &= |A_1|^2 [Re(T^2_{1,1,1})Re(T^2_{1,1,1}) + Im(T^2_{1,1,1})Im(T^2_{1,1,1})] \\ \omega_{543} &= 2[(2*2+1)(2*2+1)d^2_{1,0}*d^2_{1,0}*d^1_{1,1}*d^1_{1,1}]\end{aligned}$$